

Deterrence before Hiroshima

**The Airpower Background
of Modern Strategy**

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GEORGE H. QUESTER

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on both sides of the North Sea to severe aerial bombardment had failed to materialize.

For Britain, the lull was largely due to a persisting shortage of bomber aircraft. While the RAF Air Staff, headed by Marshal of the Royal Air Force Sir Charles Portal, urged the creation of a large bomber force, Churchill remained skeptical about the promise that a strategic air

Chapter IX

Unlimited Air War in Europe 1941-1945

THE LULL: 1941-1942

In May of 1941, as new theaters of operations opened in the Balkans and in eastern Europe, the German assault on Britain quickly tapered off. Until February of 1942, the Luftwaffe contented itself with a series of probing attacks and reconnaissance flights, coupled with some occasional raids explicitly in retaliation for attacks by Bomber Command (a raid on London on July 28, for instance, being announced as the reprisal for an RAF raid on Berlin).¹ In the same period, RAF Bomber Command continued its program of strikes against various German targets on the Continent, still changing objectives often, still varying between precision and area targets, and occasionally even attempting daylight attacks. Yet the level and intensity of the British assault was slow to rise, and heavy losses in the fall of 1941 produced a decision by Prime Minister Churchill restraining the program of raids until larger forces could be accumulated.² Bombing activity, which had been light over the period from June to November of 1940, generally became very light over the winter, and what had seemed to be an impending exposure of all the civilian population

¹ Basil Collier, *The Defence of the United Kingdom*, (London: H. M. S. O., 1957), p. 300.

² Charles Webster and Noble Frankland, *The Strategic Air Offensive Against Germany*, (London: H. M. S. O., 1961), I, p. 180.

Europe: 1941-1945

1941	April 6	German forces invade Yugoslavia and Greece, severely bombing Belgrade
	May	End of the "Blitz" over Britain, as lull begins for bomber operations in Western Europe
	June 27	Germany invades the Soviet Union
	June-November	Moderate RAF bombing offensive against Germany
	December 11	Germany declares war on the United States, after Japanese attack on Pearl Harbor
1942	February 14	Orders issued for RAF Bomber Command "area offensive," serious offensive now to continue for rest of the war
	February 27	Air Marshal Harris appointed head of Bomber Command
	April 14	"Baedeker raids" begin as Luftwaffe retaliation for Bomber Command offensive, continue through the summer
	Fall	First U.S. air forces begin to assemble in Britain
	November 2	British defeat Germans at El Alamein
	November 8	Allied force lands in French North Africa

1943	January 14-24	Casablanca Conference decides to follow dual approach in bombing of Germany
	January 24-29	RAF fire raids on Hamburg kill over 42,000 people
	January 31	Russian victory at Stalingrad, decisive reversal of Germans in Russia
	July 23	Main Russian westward advance begun
	September 3 October 10	Italy surrenders to Allies Schweinfurt raid produces heavy losses by United States Army Air Force, in daylight attacks on "precision" ball-bearing targets
1944	February	USAAF introduces long-range fighter escorts
	April	USAAF begins to shift its offensive to German oil supply
	June 6	Anglo-American forces land in Normandy
	June 10 August 23	First V-1 flying bombs hit Britain Allied forces liberate Paris, and then move rapidly toward German frontiers
	September 8	First V-2 rocket bombs hit Britain
1945	January 17	Russian forces take Warsaw, moving toward Germany's eastern frontiers
	February 13	Bombing of Dresden, 135,000 people killed
	March 7	American forces cross the Rhine at Remagen
	May 7	German unconditional surrender

offensive directed against morale could win the war without any forcible return to France:

We all hope that the Air offensive against Germany will realise the expectations of the Air Staff. Everything is being done to create the Bombing force desired on

the largest possible scale, and there is no intention of changing this policy. I deprecate, however, placing unbounded confidence in this means of attack, and still more expressing that confidence in terms of arithmetic. It is the most potent method of impairing the enemy's morale we can use at the present time. If the United States enters the war, it would have to be supplemented in 1943 by simultaneous attacks by armoured forces in many of the conquered countries which were ripe for revolt. Only in this way could a decision certainly be achieved. . . .³

Some of his skepticism was in fact bolstered by Britain's resilience during the Blitz:

The Air Staff would make a mistake to put their claim too high. Before the war we were greatly misled by the pictures they painted of the destruction that would be wrought by Air raids. This is illustrated by the fact that 750,000 beds were actually provided for Air raid casualties, never more than 6,000 being required. This picture of air destruction was so exaggerated that it depressed the Statesmen responsible for the pre-war policy, and played a definite part in the desertion of Czecho-Slovakia in August 1938. Again, the Air Staff, after the war had begun, taught us sedulously to believe that if the enemy acquired the Low Countries, to say nothing of France, our position would be impossible owing to the Air attacks. However, by not paying too much attention to such ideas, we have found quite a good means of keeping going.⁴

Morale attacks might not remain effective if Germany established herself too well in the conquered territories:

It may well be that German morale will crack and that our bombing will play a very important part in bringing the result about. But all things are always on the move simultaneously, and it is quite possible that the Nazi war-making power in 1943 will be so widely spread throughout Europe as to be to a large extent independent of the actual buildings in the homeland.⁵

Industry had, therefore, to be reserved for production other than that of bomber aircraft, and some bomber aircraft would first be required for coastal patrols and antisubmarine campaigns. Thus, Bomber Command's offensive capacity would now grow only very slowly.

On the German side, the lull that had settled over bomber activities in the West was mainly due to the tactical demands of new theaters in the East, where Luftwaffe operations against cities, however, had not been so totally absent. In his anger at the coup which had caused Yugoslavia to

³ Text in *ibid.*, p. 184.

⁴ *Ibid.*

⁵ *Ibid.*

switch sides against him, Hitler had ordered an invasion in April of 1941, accompanied by a severe raid against the capital, Belgrade, intended in part to demonstrate to his other satellites the inadvisability of any such assertions of independence.⁶

The Yugoslav episode served to impose some six weeks of delay on the grand offensive into the Soviet Union. As originally conceived by Hitler in the summer of 1940, this German venture had been closely related to airpower questions, only intending, for the time being, to push the frontier far enough back into Russia to prevent Soviet air raids on Germany, and to facilitate a Luftwaffe offensive against Soviet industrial centers.⁷ By the spring of 1941 the plan had been substantially expanded into an attempt by conventional military forces to conquer the Soviet Union completely in one major season of campaigning.⁸

Thus, as the invasion began on June 22, 1941, the Luftwaffe was again consigned to the task of tactical support; some longer-range missions were now flown against Moscow and other Soviet cities, sometimes labeled as reprisals for the very occasional long-range Soviet bomber raids, but more generally intended simply to reduce the support delivered to the Soviet front lines. While morale would be "damaged" in such raids, this would be useful mainly in reducing the Red Army's ability to resist. Nothing massive enough to distract the Russian people from the ground invasion, or to induce a surrender without military conquest, could be delivered now; even the early raids on Moscow did not compare with the experiences of London (never exceeding two hundred planes), and these very quickly dropped off as the war rolled on.⁹

As prospects for victory over the Soviets seemed bright in the summer of 1941, Hitler made plans to reduce the size of his Army and Navy, and substantially to expand his Air Force by 1942, this time really to finish Britain;¹⁰ but the ensuing disappointments of the Russian campaign canceled all such plans. The Luftwaffe involvement in tactical operations in the east was thus permanently to prevent it from ever again mustering

⁶ See Hugh Trevor-Roper (ed.), *Hitler's War Directives*, (London: Sidgwick and Jackson, 1964), p. 61.

⁷ Department of the Army, *The German Campaign in Russia: Planning and Operations, 1940-1942*, (Washington: U. S. G. P. O., 1955), pp. 1, 6.

⁸ *Ibid.*, pp. 1-33.

⁹ *Ibid.*, pp. 48, 90. See also Asher Lee, *The Soviet Air Force*, (London: Gerald Duckworth and Co., 1961), pp. 109-10.

¹⁰ See H. Trevor-Roper, *Hitler's War Directives*, p. 84 (cited in ref. 6).

a "strategic" bomber force as large as the one it had assembled in 1940.

Furthermore, the British inability to mount severe raids into Germany in 1941 had led Hitler to see supplementary advantages in the restricted air activity imposed on him by the Russian campaign. It is likely that Hitler in fact saw himself as the beneficiary of voluntary British restraints over the latter portion of 1941, and that he was overestimating the technical ability of the RAF to mount an offensive at this time.¹¹ Luftwaffe assaults on Britain in late 1941 continued, therefore, to be limited to reprisal attacks designed to give an impression of precise reciprocity for British raids on Germany, and thereby to maintain a deterrence of such raids; Hitler's public pronouncements were similarly inclined:

Should the idea of bombing civilians increase in Great Britain, I wish to say this before the whole world: "Churchill started the air war in 1940, and then started moaning. From now on I shall return blow for blow, till I have broken this criminal and his works."¹²

There is no evidence, however, to indicate that the Luftwaffe lull or the reprisal bombings had really had any deterring effect on the British leadership. The German radio broadcasts about "reprisal raids" were often interpreted simply as morale boosters for the German people,¹³ while the lull in the Luftwaffe attack was attributed entirely to a German over-commitment to the Russian front, preventing serious raids on Britain. Little importance was attached to the possibility that the Germans were exercising restraints, and any failure of the RAF to go over completely to area or morale bombing was due only to a few lingering uncertainties on the form of attack offering the greatest practical results. The precedent for terror or area bombing had been set in 1940, and no British effort was now to be forthcoming for a re-establishment of a mutual restraint. When the endurance struggle of morale was to be reopened, Churchill would rally his people to it:

We ask no favour of the enemy. We seek from them no compunction. On the contrary, if tonight the people of London were asked to cast their votes whether a convention should be entered into to stop the bombing of all cities, the overwhelming majority would cry, "No, we will mete out to the Germans the measure, and more than the measure, that they have meted out to us."¹⁴

¹¹ B. Collier, *The Defence of the United Kingdom*, p. 300 (cited in ref. 1).

¹² Text in J. M. Spaight, *Bombing Vindicated*, (London: Geoffrey Bles, 1944), p. 45.

¹³ See Alexander George, *Propaganda Analysts*, (White Plains, N. Y.: Row, Peterson, and Co., 1959), p. 118.

¹⁴ Text in J. M. Spaight, *Bombing Vindicated*, p. 45 (cited in ref. 12).

ATTEMPTS AT A DECISIVE CAMPAIGN: 1942-1944

The lull in strategic bombing was not, in any event, long to continue. On February 14, 1942, orders were at last issued to Bomber Command to embark on a new offensive of which the primary target would now be the homes of the German people. Since 1940, deliberate and straightforward "area" or "morale" bombing had often enough been tried by the British (and often, perhaps, accomplished by both sides); it now was to be general policy, drawing the largest part of Bomber Command's tonnage from 1942 to 1944.¹⁵ The offensive began with the series of attacks on the Ruhr city of Essen between March 8 and 10, followed on the 28th by a spectacular fire raid of 200 bombers on the old German port of Lübeck. With raids occasionally of more than 1000 aircraft, the ferocity of the area assault was really now to be restrained only by technical or meteorological obstacles. No longer would a city in Germany be spared because of its remoteness from clearly military targets, no longer would specific targets in large cities be aimed at, rather than the city as a whole, and no longer would Bomber Command's offensive be so limited in volume as to make such distinctions imperceptible.

A great deal of speculation on bombing strategy now emerged. In March, Churchill's scientific adviser, Lord Cherwell (Professor F. A. Lindemann), presented calculations on the expected effects of a 10,000 bomber offensive against residential areas, showing that German morale and industry would severely suffer.¹⁶ Air Chief Marshal Sir Arthur Harris, having been appointed head of Bomber Command on February 22, came forward with similar arguments that air attack would drastically weaken the German war effort, and at times even hinted that the Germans could be induced to surrender by such painful attacks alone, so that no forceful invasion might be needed:

It is imperative, if we hope to win the war, to abandon the disastrous policy of military intervention in the land campaigns of Europe, and to concentrate our air power against the enemy's weakest spots. . . . The utter destruction of Lübeck and Rostock, the practical destruction of Cologne (a leading asset to Germany turned in one night into a vast liability), point the certain, the obvious, the quickest and the

¹⁵ See United States Strategic Bombing Survey, *Description of R.A.F. Bombing*, (Washington, 1945), p. A-2.

¹⁶ C. Webster and N. Frankland, *Air Offensive Against Germany*, I, pp. 331-32 (cited in ref. 2).

easiest way to overwhelming victory. The overstrained, far stretched and militarily compromised condition of Germany plays right into our hands—if we now employ our air power properly. The success of the 1,000 Plan, has proved beyond doubt in the minds of all but wilful men that we can even today dispose of a weight of air attack which no country on which it can be brought to bear could survive. We can bring it to bear on the vital part of Germany. It requires only the decision to concentrate it for its proper use.¹⁷

While Cherwell's conclusions were strongly challenged by Sir Henry Tizard and others who objected to the expenditure of resources on bombers,¹⁸ and while Churchill did not by any means commit himself to Harris' vision of a victory through airpower without an invasion, the Prime Minister's summation of the strategic outlook in June of 1942 did give the air offensive a resource priority almost equal to that of the invasion, and promised that aircraft shortages in Bomber Command would now be remedied.

On the other hand, we Allies have the air power. In the days when we were fighting alone, we answered the question: "How are you going to win the war?" by saying: "We will shatter Germany by bombing." Since then the enormous injuries inflicted on the German Army and manpower by the Russians, and the accession of the manpower and munitions of the United States, have rendered other possibilities open. We look forward to mass invasion of the Continent by liberating armies, and general revolt of the populations against the Hitler tyranny. All the same, it would be a mistake to cast aside our original thought which, it may be mentioned, is also strong in American minds, namely, that the severe, ruthless bombing of Germany on an over-increasing scale will not only cripple her war effort, including U-boat and aircraft production, but will also create conditions intolerable to the mass of the German population. . . .

We must regard the bomber offensive against Germany at least as a feature in breaking her war-will second only to the largest military operations which can be conducted on the Continent until that war-will is broken . . . Provision must be made to ensure that the bombing of Germany is not interrupted, except perhaps temporarily, by the need of supporting military operations.¹⁹

In response to the new British offensive, the Luftwaffe, on April 14, was ordered to begin a series of reprisal raids aimed simply to inflict suffering

¹⁷ Text in *ibid.*, p. 341.

¹⁸ *Ibid.*, pp. 332-35.

¹⁹ Text in Winston Churchill, *The Hinge of Fate*, (Boston: Houghton Mifflin Co., 1950), p. 887.

on the British population, aimed at militarily insignificant towns of great historical or cultural value.²⁰ These "Baedeker Raids" continued into the summer of 1942 (with one more October raid on Canterbury), but the Luftwaffe was unable to match the greatly augmented British effort, delivering only some 3000 tons of bombs, a small fraction of its 1940 and 1941 performance.²¹ The German government now publicly described the Luftwaffe attacks on Britain as reprisals for the Allied air offensive. Hitler himself continued to insist in his speeches that the bombing of cities had never been his intention, and that it had been initiated by the British; his radio broadcasts in late 1942 indicate some willingness to abstain, coupled with a threat of more severe retaliation if the British persisted:

Apart from the second front, our enemies have another means to carry on the war—bombing of the civilian population. The man who invented the bombing war now declares that the bombing war will increase in violence in the future. In May, 1940, Churchill sent the first bombers against the German civilian population. I warned him then, and I continued to warn him for four months, but in vain. Then we struck hard. When we did so they began weeping and whining. There was talk of barbarity and disgusting inhumanity. A man who, apart from the principal warmonger, Roosevelt, is the main culprit, pretended to be innocent, and today they are again carrying on this bombing war. I should like to say this. This time, too, the time will come when we shall reply.

... Do you think I don't eat my heart out when I think of the British attacks on Germany? We did not drop a single bomb on Paris. Before I attacked Warsaw I five times asked them to capitulate, and only then did I do what is allowed by the rules of war. It is just the same today. I don't forget, I take good note of it all. They will find out in Britain that the German inventive spirit has not been idle, and they will get an answer that will take their breath away.²²

The RAF area offensive rolled on into 1943. Despite the intensity of the raids on other German cities in 1942, the assault on Berlin was not resumed until January of 1943, whereupon the Luftwaffe replied with an attack on London and another series of scattered raids lasting into May. On July 24 began the massive RAF fire raids on Hamburg, which did an unprecedented amount of damage to the town over the next four days, killing some 42,000 people, more than had been killed in Britain in the entire

²⁰ B. Collier, *The Defence of the United Kingdom*, p. 305 (cited in ref. 1).

²¹ Terence H. O'Brien, *Civil Defence*, (London: H. M. S. O., 1955), p. 680.

²² Text in J. M. Spaight, *Bombing Vindicated*, p. 46 (cited in ref. 12).

Blitz.²³ Luftwaffe reprisals were weak over the last half of 1943, but early in 1944 there began a series of relatively effective night assaults on London (the "Baby Blitz") which continued into May. For more than two years, therefore, RAF Bomber Command was engaged in a massive and deliberately terroristic bombing campaign, with the Luftwaffe attempting to respond in kind, but unable to do so meaningfully because of its technical limitations. But another major bomber force had now arrived on the scene, with some markedly different notions of appropriate bombing strategy.

STRATEGIC DISPUTES AND THE USAAF: 1942-1944

Having been brought into the European war after Pearl Harbor, the United States Army Air Force (USAAF) had begun to assemble units in Britain in late 1942. Committed still to a policy of daylight, high-altitude, precision bombing of industrial and "military" targets, American planners were adamantly unwilling to merge their forces into Bomber Command's nighttime "area" offensive. At the Casablanca Conference of January 1943, British protests were voiced against this American intention of seemingly ignoring three years of British experience, but the U.S. argument was convincingly presented by General Ira Eaker that the two Allied bombing strategies were a natural complement to each other, that both were needed, and that the American forces would prove the value of their approach.²⁴ When American strategic independence no longer would be in doubt two years later, less flattering operational and moral descriptions of the RAF area attacks would come from the American side.

The broad bombing policy finally laid down at Cairo called for attacks both on precise industrial targets (of which first priority was given to submarine support facilities and the aircraft industry) and on German morale. From the beginning of serious American operations, British forewarnings began to be confirmed, however, that high casualties would be suffered in daylight raids. As the American bombing units then sought the "bottleneck" or "panacea" targets that might cut down the Luftwaffe's

²³ Hilary StG. Saunders, *Royal Air Force 1939-1945*, (London: H. M. S. O., 1954), III, p. 7; David Irving, *The Destruction of Dresden*, (New York: Holt, Rinehart, and Winston, 1963), p. 44.

²⁴ Wesley Craven and James Lea Cate, *The Army Air Forces in World War II* (Chicago: University of Chicago Press, 1949), II, p. 302.

dangerous interceptor strength, several raids turned into near disasters, most memorably the mission of October 10, 1943 against the ball-bearing industry in Schweinfurt that cost 60 aircraft destroyed and 138 damaged out of a total force of 291.²⁵ Once again Harris and the planners of his Bomber Command suggested that the Americans switch to the area offensive, which promised that the German Air Force and aircraft industry might even be ignored, as Germany's cities themselves were wiped out.²⁶ Instead, the American response was to ask Harris to reschedule his own area attack specifically to help in the attrition of the German air industry, that is, to attack Schweinfurt by night.²⁷

Getting only a little help from Bomber Command, however, the United States Eighth Air Force in Britain turned, in February of 1944, to long-range fighter escorts, and found the solution to its casualty problems. For the ensuing four months, a substantial American bombing offensive did get under way, still showing indecisive results, however, in strikes at the aircraft industry. At last, in April, it shifted its attention to the German oil supply, which until then had held a low priority—an important shift indeed.²⁸

While Harris and Bomber Command were nominally subordinate to the RAF Air Staff (which tended here to agree with the Americans), they now had a special prestige in Britain, and a special access to Prime Minister Churchill that allowed a continuation of the indiscriminate night offensive.²⁹ Harris sanctioned a few precision attacks against dams or German missile development sites, but could still see no better general target for RAF bombers than morale and residential areas as a whole, and he stuck to this interpretation as 1944 began, planning a monster offensive against Berlin itself.³⁰ Thus, despite "higher" directives and American theories, the continuity of Bomber Command's commitment to area countervalue attack was not yet to be broken. Paradoxically, as the American daylight offensive now had overcome its day-fighter opposition, RAF Bomber Command, in

²⁵ Charles Webster and Noble Frankland, *The Strategic Air Offensive Against Germany* (London: H. M. S. O., 1961), II, p. 39.

²⁶ *Ibid.*, pp. 48-50.

²⁷ *Ibid.*, pp. 59-69.

²⁸ Wesley Craven and J. L. Cate, *The Army Air Forces in World War II* (Chicago: University of Chicago Press, 1951), III, pp. 173-76.

²⁹ Charles Webster and Noble Frankland, *The Strategic Air Offensive Against Germany* (London: H. M. S. O., 1961), III, pp. 78-85.

³⁰ C. Webster and N. Frankland, *Air Offensive Against Germany*, II, p. 48 (cited in ref. 25).

1944 for the first time, encountered greatly improved German night-fighter tactics, which markedly increased casualties on area bombing raids, therefore forcing Harris to abort his project to level Berlin.³¹ As the spring of 1944 ended, moreover, a new slowdown of both the air offensives against Germany was ordered, to meet the tactical demands of the impending Normandy landings.

Debate and planning about whether to launch an invasion had certainly not been unrelated to the differing theories of air operations. Broadly, three arguments had been presented. Most American Army and Navy officers had seen a major invasion as the only means of defeating Germany and freeing the Continent; this became the official U.S. position. As an alternative, Winston Churchill had seen a smaller invasion as a *coup de grace* to be inflicted after blockade, greater air attack, and peripheral surface operations had thoroughly exhausted the Germans. In spirit, the American air planners somewhat agreed with Churchill, since they saw their precision bombing as a means of wearing down the German war machine to the point that only a smaller invasion would be required.³² Harris' Bomber Command area offensive also fitted this strategy. The third argument, occasionally offered by Harris himself, was that air attack of the more terroristic form might force the Germans to surrender without any invasion at all; at one point in 1943 Harris even suggested that he could force a German capitulation by the following April.³³

THE DECISIVE CAMPAIGN: 1944-1945

The American insistence on a major invasion had, by 1944, at last won out; not as much was to be allowed to depend on airpower, therefore, as some had urged. As the invasion was launched, and as its success was then established, the two Allied bomber forces returned to their plans for the assault on Germany. However, German means of retaliation were not yet completely lacking, and some effort was still expended to try to deter the Allied assault. The first V-1 bombs aimed at London were launched on June 10, 1944, the first V-2's on September 8, both of these indiscriminate-ly aimed missiles being again openly labeled as reprisal weapons.³⁴ Evi-

³¹ *Ibid.*, p. 193.

³² Maurice Matloff and Edwin Snell, *Strategic Planning for Coalition Warfare 1941-1942*, (Washington: U. S. G. P. O., 1953), p. 321.

³³ C. Webster and N. Frankland, *Air Offensive Against Germany*, II, p. 192 (cited in ref. 25).

³⁴ B. Collier, *The Defence of the United Kingdom*, pp. 367, 406 (cited in ref. 1).

dence, moreover, indicates that discrete efforts had several times been made by the German Foreign Ministry to seek some mutual limiting of attack through contacts in neutral countries, apparently with a total lack of success.³⁵ The German V-weapon offensive was, in any event, not as awesome as the earlier "Blitz" had been, since Allied bomber missions diverted against launching sites served substantially to inhibit it. The total of British civilians killed in 1944 and 1945 thus reached 10,000, an unpleasant but not unbearable burden.³⁶

As France was liberated, moreover, the German early warning and night-fighter control stations were overrun, so that now both Allied bomber forces would again face only an acceptable German interceptor opposition.³⁷ In April and May, the American bomber forces in Britain and Italy, under the over-all command of General Carl Spaatz, had shifted their precision offensive to the German oil industry, and the RAF Air Staff now agreed that this was logically the primary precision target. Because ground force commanders desired some continuation of the communications offensive that had been carried on prior to, and during, the Normandy landings, this became the secondary precision target.³⁸ Some combination of the two was pursued by the USAAF for the rest of the war, and the results were ultimately decisive. While Germany was, in fact, to be defeated and overrun with ground forces by May 7, 1945, she would not have been able to fight on much longer in any event, due to economic limitations now imposed by a precision air attack that was locked on to the right targets for only eight months. Airpower thus demonstrated in postwar analysis, if not in actual practice, that it could perhaps have made a much smaller invasion decisive.³⁹

Pleas from Chief of Air Staff Portal to Harris that he join the USAAF precision offensive were bypassed, however, and when Harris offered his resignation on the issue, Portal felt politically unable to accept it.⁴⁰ The divergence in strategies thus went on. RAF Bomber Command had acquired some remarkable nighttime precision capabilities in its participation in

³⁵ Ulrich von Hassel, *Diaries*, (Garden City, N.Y.: Doubleday and Co., 1947), p. 351.

³⁶ R. M. Titmuss, *Problems of Social Policy*, (London: H. M. S. O., 1950), p. 559.

³⁷ C. Webster and N. Frankland, *Air Offensive Against Germany*, III, p. 89 (cited in ref. 29).

³⁸ *Ibid.*, pp. 42-64.

³⁹ W. Craven and J. L. Cate, *The Army Air Forces in World War II*, III, pp. 793-97 (cited in ref. 28).

⁴⁰ C. Webster and N. Frankland, *Air Offensive Against Germany*, III, p. 93 (cited in ref. 29).

the attack on communications in France, but this new precision was now to be predominantly applied to more accurate "area" raids on German residential areas.⁴¹ Harris did not absolutely or clearly refuse to switch to the oil or transportation offensive, but Bomber Command continued to deliver more of its tonnage against cities *per se*. Public descriptions of the RAF's bombing campaign tended to be somewhat contradictory over this period. While Harris made statements fairly clearly spelling out the morale-destroying nature of area bombing, the civilian Secretary of State for Air, Sir Archibald Sinclair, at various times felt required to deny, both for foreign and domestic consumption, that terror was intended. From 1943 to 1945, objections to deliberate bombing of working-class residences were several times expressed in Britain, in the Labour Party and in religious circles. Yet, while trying to mollify such objections in public, Sinclair showed little or no disagreement with Harris' objectives in his private correspondence.⁴²

Although the RAF Air Staff endorsed the final USAAF campaign of precision attack, it never became as dogmatically convinced as the Americans that terror-bombing was always useless. It had supported the RAF area offensive in 1941, and in the fall of 1944, its planners began again to speculate on a massive raid, christened "Operation Thunderclap," which would be inflicted by both bomber forces, near the close of the war, to convince the Germans that guerrilla resistance would be inadvisable. While it was normal for ground commanders to argue that terror-bombing could not suffice without military occupation, the assumptions, here, were just the reverse—that occupation could not suffice without terror-bombing.⁴³

As this operation was analyzed, skepticism arose, however, about its original function, and in 1945 it came to be reconsidered as a form of semitactical assistance to the Soviet forces now rapidly closing in on the eastern German frontiers. The massive strike was thus to be reinterpreted as an extra disruption of German communications, which would enable Russian ground forces to make more progress. The Soviets had only most generally requested this, tentatively suggesting raids on Berlin and Leipzig.⁴⁴

Several earlier suggestions for American participation in a raid as massive

⁴¹ *Ibid.*, pp. 180-81.

⁴² *Ibid.*, pp. 114-16.

⁴³ *Ibid.*, p. 98.

⁴⁴ See *ibid.*, p. 113; and W. Craven and J. L. Cate, *The Army Air Forces in World War II*, III, p. 731 (cited in ref. 28).

and terroristic as Thunderclap had brought objections from Spaatz, which were conveyed up to SHAEF and General Eisenhower—objections which usually, but not always, had been upheld. In any event none of these joint terror attacks had yet been carried out. The objections of Spaatz and some other American air officers were phrased on moral grounds, rejecting the deliberate killing of civilians, stating that such raids would be contrary to American ideals.⁴⁵ These objections, of course, dated back to the 1920's, but still had not quite lost all of their significance for American policy.

Now American bombers were in fact to participate in a series of severe raids against Berlin on February 3, and against several smaller German cities, the most painful raid coming against Dresden from February 13 to 15, killing about 135,000 people.⁴⁶ American newspapers reported that U.S. Air Forces in Europe had joined the area offensive, and that terror would be the general Allied means of forcing a German surrender. However, Spaatz, even before the raids were launched, had defined American practice in the assault still as one of precision (therefore legitimate) attacks, and the majority of German civilian casualties in each of the raids was, in fact, inflicted by RAF Bomber Command. Spaatz, therefore, went to the trouble of denying the newspaper reports.⁴⁷

The Soviet Air Force itself had managed to carry through only a very few raids against German cities, and these always with relatively small forces; while U.S. bombers occasionally were staged into Soviet bases, the air war in Russia did not really develop beyond the tactical requirements of the ground campaigns. The Luftwaffe had not ever been able to muster a city-busting force large enough to have any real intimidating effect in Russia. For a few weeks, in the summer of 1943, some long-range counter-industry missions were flown, but these quickly terminated as the Germans needed their bombers elsewhere; even the severe bombings of Leningrad and Stalingrad had come only as German armies were on the edges of these cities. While the Soviet government frequently asked the United States and Great Britain for four-engine bombers, these were never made available in Lend-Lease. As a result, the Soviets did not themselves derive much experience (offensive or defensive) in any air activity that could

⁴⁵ W. Craven and J. L. Cate, *The Army Air Forces in World War II*, III, pp. 638, 725-27 (cited in ref. 28).

⁴⁶ D. Irving, *The Destruction of Dresden*, p. 210 (cited in ref. 23).

⁴⁷ W. Craven and J. L. Cate, *The Army Air Forces in World War II*, III, pp. 725-27 (cited in ref. 28).

clearly be separated from tactical operations, and since the war Soviet official organs have tended to belittle the military significance of World War II strategic air operations.⁴⁸

SUMMATION: 1941-1945

The Allied calculations on bombing policy after 1941 once again covered that spectrum of possible effects that was first developed in World War I. Bombing could physically disable the German war machine, or tire, kill, or demoralize its workers; it could provoke workers or civilians in general to disavow or overthrow their government, or could influence the German government, in sympathy with, or in fear of its people, to certain courses of action. The only course of action now to be sought after, however, was unconditional surrender. Some lesser concessions might have been sought through the selective application of Allied terror-bombing, but by 1941 the Allies had, in fact, lost interest.

The American and British leadership now publicly professed to see Hitler as impervious to bargaining on such matters, and as bloodthirstily irrational. If anyone really came to believe this, it was at least, in part, Hitler's fault. It may well have been that Hitler, at some point, saw advantage to appearing tough and callous on the bombing question, in hopes of successfully blackmailing, without in turn being subjected to such blackmail. But given the fact that he did also very much desire certain discretions in Allied targeting practices, for which he would have been willing to make small concessions, an appearance of imperviousness to bargaining may have become a liability.

It is interesting to contrast the Allied statements on Nazi irrationality with those we make in the present-day world—statements which seem diametrically opposite. The entire contemporary literature of deterrence has seemed to depend on the assertion that the Soviet leadership is sympathetic enough to its populace to make it unwilling to aggress, even if this leadership could survive a war of aggression in power and unscathed. In fact, we often find an explanation offered for this contrast that "the Russians are rational, while Hitler was not"—an explanation offered by advocates of strong U.S. retaliatory forces, or even by advocates of disarmament. "Rationality," as the term is used in such discussions, apparently means

⁴⁸ See Raymond Garthoff, *Soviet Military Doctrine*, (Glencoe, Ill.: Free Press, 1953), pp. 343-49; and A. Lee, *The Soviet Air Force*, pp. 109-10, 126-30 (cited in ref. 9).

precisely an awareness of the vulnerability of one's populace, and an aversion (up to some limit) to any suffering of such populace. Hitler in fact was "rational" in that he had both of these.

What Hitler did not have, after 1940, was a sufficiently awesome retaliatory bombing capacity. British planners tended to view the 1940-1941 Blitz as the worst punishment the Germans could have inflicted, a punishment which was, in fact, far less severe than had been expected, a punishment which might be absorbed again in the future as the price of great strategic advantages such as those now seen in an area offensive against Germany.

We say, today, that all our hopes depend on some rationality of the Soviets, because we know that the Soviets can inflict extreme discomfort upon us. Had the Germans been able to launch raids with thousands of four-engine bombers on London or New York in 1944, a similar rationality ("on which all our hopes depend") would very likely have been rediscovered in Hitler, and a new mutual deterrence might have been likely. As it was, what Hitler could meaningfully threaten to do with his Luftwaffe was simply not enough; whatever could now be secured for the Allies by tacit bargaining did not seem to be worth the effort. (There were, however, actually some smaller gains that might have been worth negotiating for, and some concessions to Germany were possible that would not have delayed the Allied military victory.)

The German government did not hesitate, however, to try still to convince the British that mutual restraints would be advisable. The form of the German Baedeker raids constituted a "limited strategic" warning to Britain that the Blitz could have been more painful, and that it could be reproduced in a worse form in the future. Such raids had no military impact, and thus had to be a waste of German resources if they did not succeed in intimidating Britain and deterring its Bomber Command.

The Baedekers had not been convincing, however, for while more sensitive targets were aimed at, smaller tonnages were delivered, so that the suffering of Britain's populace was considerably less in such "terror" attacks than it had been in the "discriminate" Blitz. Similarly, the German radio threats of reprisals (dismissed in the West as propaganda), the attempts at negotiation in neutral countries, the failure to bomb London during the Baedekers (until 1943 when Berlin was again bombed) and the "Baby Blitz" on London in 1944, all constituted actions appropriate to some form of mutual deterrence. Ever convinced that meaningful retaliation would be necessary to stop the Allied bombings, or at least to make

them psychologically bearable for the German people, Hitler strove persistently to re-establish some threat.

Fine. Instead of monkeying around, let's attack, get ready here, and pick out a target—it doesn't matter what target. We can't go on this way. Eventually the German people will go nuts. When I hear that we have committed 50 hit-and-run bombers, so and so many mine laying planes, or have attacked an airfield somewhere or other, then I consider that a poor joke. That is avoiding the only effective method. Terror can only be broken by terror, and in no other way. . . . But the decisive thing is that the English will stop only if their cities are knocked out, and for no other reason. These other measures might delay them for a night, but they won't stop unless their cities are knocked out. That's clear. I can only win the war if I destroy more of the enemy's than he destroys of ours; by teaching him the terrors of war. That's always been the way, and it's the same thing with regard to air war.⁴⁹

By 1944, Germany was able to achieve quantity production of the "V" (for "Vergaeltung": revenge) weapons, but could also have procured more jet interceptor aircraft capable of inflicting substantially higher casualties on Allied bombers; Hitler had chosen the revenge option. Yet, if Hitler really hoped to put an end to the Allied air raids, his failure to give a greater priority to the jet fighter may have been a mistake.

Interestingly enough, the Fuhrer also reasoned that honest forewarnings and descriptions of the worst civilian suffering in the Allied air raids would be required, somehow, to sustain German morale. If the Germans knew what to expect, they might better be able to bear it.

Up to now they (the British) haven't done that. They haven't denied the damage. One can't do that. One can't risk it. That caused bad blood here at the beginning of the war and a few times thereafter, when, on the basis of Air Force reports, it was announced that there had been very small damage, when actually there had been great damage. I don't know what kind of a local impression that made in the Rhineland, where the Air Force itself issued such reports. Now that has been stopped. Now only accurate reports are used. It was especially shameless in Cologne. The people will bear anything; but if the official High Command communique announces no damage, or only insignificant damage, and actually 9000 houses are destroyed or damaged, that of course is fantastic.

The principle is applicable here, too: one has to train all of them to report the most brutal truth. For it is easier to bear the most brutal truth, no matter how disgusting it is, than an embellished picture which doesn't correspond with the truth.⁵⁰

⁴⁹ Felix Gilbert (ed.), *Hitler Directs His War*, (New York: Oxford University Press, 1950), pp. 41-42.

⁵⁰ *Ibid.*, pp. 15-16.

The British area attack was primarily prosecuted on the assumption that a greater physical attrition of the German war machine might thus be accomplished. It also was expected that the German government might be forced to the supreme concession of surrender, or forced, somehow, out of office, and that continued bombing, at close to a maximum of frightfulness, would perhaps motivate someone in Germany to want to prevent the next day's destruction, after he had suffered that of yesterday. Pain infliction did not have to be consciously restrained here to be a motivational tool; merely by operating at the limits imposed by technical considerations, one might still leave something that the other side would try to preserve. However, area bombing proved very disappointing; with regard to the destruction of industries located in cities, and the reduction of the German population's willingness or ability to serve the Nazi regime, the optimistic calculations made here have been subjected to much criticism since the war.

The U.S. Strategic Bombing Survey concluded, in the summer of 1945, that from capability or military considerations alone, the area attack had been a bad investment, and that a Bomber Command precision assault similar to that of the USAAF (even if it would have had to come by daylight with higher losses) would have contributed more to the final military breakdown of Germany.⁵¹ A similar opinion about the impact of the different bombing campaigns on industry, as well as its relationship to morale, was offered by Albert Speer, director of German industrial mobilization in the latter half of the war:

The American attacks, which followed a definite system of assault on industrial targets, *were by far the most dangerous. It was in fact these attacks which caused the breakdown of the German armaments industry.* The night attacks did not succeed in breaking the will to work of the civilian population. Two mistakes were made in this connection:

(1) The weight of the attack was *gradually stepped* up and consequently it was possible to improve defensive measures and the civilian population was able to accustom itself to the raids. In every case in which the RAF *suddenly* increased the weight of its attacks, as for example the first attack on Cologne and Hamburg and the attacks on Dresden, the effect not only upon the population of the town attacked but upon the whole of the rest of the Reich was terrifying, even if only temporarily so.

(2) The powers of resistance of the German people were underestimated and no account was taken of the fatalistic frame of mind which a civil population finally

acquires after numerous air raids. Other peoples, as perhaps the Italians, would have certainly collapsed under a similar series of night attacks and would have been unable to undertake further war production.⁵²

Police control of the German population was perhaps effective enough by 1944 to make unlikely any rebellion or defection similar to that of 1918. However, the desires of the German Army to depose Hitler, particularly in the unsuccessful coup of July 20, 1944, certainly were intensified by the German suffering in the Allied bombings, and while this threat did not come from the expected source, perhaps the calculations of Air Chief Marshal Harris were not quite so mistaken. Yet this rebellion, perhaps by the worst of bad luck, did not succeed, and neither did any others. It is difficult to determine whether German resilience could have lasted for any length of time (to 1948 or 1955?). The suffering of the German people would have grown worse, but Nazi control over all of German society also would have grown even tighter.

Fear, moreover, that Germany might always develop some odds-reversing "wonder weapon" (jet fighters, or even the atomic bomb, perhaps) could not have allowed Allied planners to contemplate waiting that long. To hasten along the change in administration, a bombing raid on Berchtesgarden (Operation Hellhound) was, in fact, contemplated at one point to kill Hitler himself, but was given up for fear that it would fail and serve only to induce the German people to identify more closely with their dictator.⁵³ The Germans now seemed to have fewer massive threats left to command and control, and a disruption of governmental patterns might even have led to more civilized behavior.

But even if Germany did collapse and surrender under bombardment, the burden (and opportunity) of liberating Europe might too immediately have fallen to the Soviet Union, especially after 1943. Before the Normandy invasion had been set on its way, contingency plans (Operation Rankin) had been drawn up in London for a rapid deployment of troops to the Continent to take control in the event of bombardment-induced German surrender.⁵⁴ But by 1944 and 1945, a combination of Russian and partisan forces might well have gotten to the national capitals even before Anglo-American paratroops did.

⁵² Text in Charles Webster and Noble Frankland, *The Strategic Air Offensive Against Germany*, (London: H. M. S. O., 1961), IV, p. 383 (italics in original).

⁵³ W. Craven and J. L. Cate, *The Army Air Forces in World War II*, III, p. 638 (cited in ref. 28).

⁵⁴ C. Webster and N. Frankland, *Air Offensive Against Germany*, III, p. 12 (cited in ref. 29).

⁵¹ United States Strategic Bombing Survey, *Overall Report (European War)*, (Washington, 1945), pp. 71-74, 107-8.

*Churchill's
change to hear*

Little was accomplished, in any event, by terrorism, and nothing that could justify the physical opportunities missed for a greater British precision assault on oil and transportation. British plans for a German surrender without a prior invasion of the Continent, therefore, seem harder to justify. As the defeat of Germany became increasingly likely when spring arrived in 1945, even Winston Churchill expressed concern that area bombing would destroy much that Britain's interest might want to preserve, and belatedly seemed to rebuke his air officers for the waging of an irrational terror offensive.

It seems to me that the moment has come when the question of bombing of German cities simply for the sake of increasing the terror, though under other pretexts, should be reviewed. Otherwise we shall come into control of an utterly ruined land. We shall not, for instance, be able to get housing materials out of Germany for our own needs because some temporary provision would have to be made for the Germans themselves. The destruction of Dresden remains a serious query against the conduct of Allied bombing. I am of the opinion that military objectives must henceforward be more strictly studied in our own interests rather than that of the enemy.

The Foreign Secretary has spoken to me on this subject, and I feel the need for more precise concentration upon military objectives, such as oil and communications behind the immediate battle-zone, rather than on mere acts of terror and wanton destruction, however impressive.⁵⁵

Churchill was asked by his Chief of Air Staff Portal to withdraw this memorandum, perhaps in view of the general civilian endorsement Bomber Command had received for its area offensive of the past four years, and he replaced it with one showing no implication of criticism.⁵⁶

The American precision bomber offensive, in turn, was prosecuted primarily on the assumption that it would more directly and effectively disarm Nazi Germany. This assumption proved correct. The precision oil and transportation campaigns actually implemented by the Americans did indeed inflict enough damage to make plausible the hopes for a final defeat of even a fanatical Nazi Germany by a small *coup de grace* invasion, with the German armed forces immobile, underfed, unable to fly, etc. Yet the issue of civilian suffering, while in no sense decisive, was nonetheless also still visible here. Some forms of precision bombing, of course, inflicted less collateral damage than others; attacks on communications

⁵⁵ Text in *ibid.*, p. 112.

⁵⁶ *Ibid.*, p. 117.

probably killed more civilians than did the offensive on oil, and Winston Churchill in 1944 had vigorously opposed the pre-Normandy assault on French railways because he feared that too many French civilians would be killed.⁵⁷ Yet the distinction between collateral damage and deliberate terror was old and had been widely discussed for several decades, so that it might still be recognizable in the German camp. While American moral protestations against involvement in RAF area attacks do not explain USAAF strategy, such protestations show that this distinction was also still recognizable in the Allied camp.

It might thus be contended that a puncturing of the British faith in "area" bombing, combined with a greater awareness of a German willingness to bargain on smaller issues, would have made a deliberate general Allied restraint after 1942 seem quite appropriate. It might be claimed that the "senseless" destruction of area bombing should have been used only as an unexecuted deterrent, to prevent the relatively weaker, yet deliberately terroristic, Baedeker raids and "Baby Blitz," and the indiscriminate V-1, and V-2 attacks. The possibility that the area-precision distinction might further have been used as a lever to deter other obnoxious practices in Nazi Germany can also be raised. While the Allied belief was probably quite valid that Hitler himself would never be brought to surrender to spare his people's being bombed, the possibility that lesser concessions would have been induced may well have deserved more attention. While Hitler's fears of a repetition of 1918 may or may not have been mistaken, the Nazi regime was, in any event, concerned about the possibility of revolt; it furthermore identified with the German people in their suffering. If the evidence shows that Hitler by 1945 had resigned himself to (or had turned in favor of) a general destruction of Germany, it nonetheless also shows that in earlier periods he had had other interests. The Allies claimed to believe that Hitler had no negotiable values; for as long as Hitler's defeat was not obvious and inevitable, this may have been false.

An exaggerated hope of the earlier British air planners thus had outlived exaggerated fears disproven in the Blitz. Only a greater German care in preserving the Luftwaffe's image of bomber strength might have perpetuated the balance of exaggerations. In the event, over 1,500,000 tons of bombs were delivered to Germany by the Allies, of which clearly the largest portion came in the last two years of the war. Some 300,000

⁵⁷ *Ibid.*, pp. 34-38.

Germans were killed in the air raids and 780,000 seriously injured. Of the tonnage delivered, over 600,000 tons belonged to the USAAF, and about 900,000 to RAF Bomber Command. Close to 500,000 tons of the latter were devoted to the "area" offensive.⁵⁸

The terror potential of the Allied Air Forces could have been used either to push for a German surrender, or to deter German terror. The first goal was pursued by the RAF, which settled the Allied decision, while the USAAF ignored both possibilities and concentrated on disabling the German military machine. The USAAF, in any event, could not have contemplated offering a meaningful exemption to Germany, by its precision campaign, as long as the RAF was attempting to level the same cities on the nights following American daylight raids.

⁵⁸ Exact tonnage totals for the bomber offensives of World War II are difficult to establish, since bombs were not always delivered precisely to assigned targets, and since distinctions between area and precision targets were less than clear. The figures used here compare with those found in United States Strategic Bombing Survey, *Overall Report (European War)*, pp. 1-3, (cited in ref. 51); W. Craven and J. L. Cate, *The Army Air Forces in World War II*, III, p. 801 (cited in ref. 28); C. Webster and N. Frankland, *Air Offensive Against Germany* IV, p. 49 (cited in ref. 52); and P. M. S. Blackett, *Military and Political Consequences of Atomic Energy*, (London: Turnstile Press, 1948). pp. 215-16. For a full analysis of the social consequences of the bombings of Germany, and Japan, see Fred Charles Iklé, *The Social Impact of Bomb Destruction*, (Norman, Okla.: University of Oklahoma Press, 1958).

Chapter X

Culmination in the Pacific 1941-1945

THE EARLY BOMBING EXCHANGE: 1941-1944

As the Japanese attacks went into Pearl Harbor, the process of constituting a U.S. bomber threat against the Japanese homeland had still not been completed. An important Japanese attack, planned to coincide with the Pearl Harbor strike, had been scheduled against these bomber installations in the Philippines, and the neutralizing of the U.S. Air Force there, in fact, had the highest priority among Japanese objectives in the islands.¹

But weather conditions at the Formosa bases prevented the execution of this attack on schedule, arousing extreme fears at the Japanese airdromes that a U.S. pre-emptive attack was on its way. Precautions, including the donning of gas masks, were ordered into effect, but no U.S. attack came.² U. S. forces in the Philippines, on the day of the Pearl Harbor attack, included only 37 B-17s of the projected force of 340. The decision of whether to launch a raid against Formosa was made and reversed several times, and by noon of December 8 (approximately 4 P.M. December 7, in Hawaii) the B-17s had still carried out only reconnaissance patrols, having been finally recalled to load bombs for a strike at Formosa. By the time this loading had commenced, the first Japanese strike at last arrived,

¹ Louis Morton, *The Fall of the Philippines*, (Washington: U.S.G.P.O., 1953), p. 80.
² *Ibid.*

destroying more than half of the B-17s, and forcing an early withdrawal of the remaining bombers to the south.³

The Japanese attack on Pearl Harbor itself had been entirely absorbed by the naval and military installations on Oahu, and only one stray bomb

Overseas: 1941-1945

1941	December 7	Japanese attack on Pearl Harbor and U.S. air bases in the Philippines
1942	February 15	Fall of Singapore, followed by invasion of Dutch East Indies
	April 18	Doolittle bomber raid on Tokyo ✓
	May 6	Surrender of last U.S. forces in Philippines
	May 7	Japanese southward naval progress halted in Battle of the Coral Sea
	June 4-7	Battle of Midway. Japanese repulsed in attempt to capture island base in mid-Pacific
	August 7	U.S. landings in Guadalcanal
1943	June-October	U.S. attempts, unsuccessfully, to establish air supremacy in China
1944	June 16	First B-29 raid on Japan, from bases in China ✓
	June	Japanese launch major offensive in China to seize B-29 bases
	July 18	U.S. capture of Saipan, in Marianas Islands, leads to fall of Tojo Cabinet in Japan
	September 8	Octagon (Quebec) Conference convened, decides invasion of Japan will be necessary ✓
	November 26	First B-29 raid on Japan (Tokyo) from Marianas

³ *Ibid.*, pp. 88-90.

1945	January	B-29s leave China as result of Japanese ground offensive
	March 9	First "area attack" by USAAF on Tokyo, killing 83,000 people
	May 7	German surrender in Europe
	August 6	Atomic bomb dropped on Hiroshima
	August 9	Second atomic bomb dropped on Nagasaki
	August 14	Japanese surrender

had fallen into the city of Honolulu.⁴ The ensuing Japanese attacks in the Philippines, and in Malaya and Burma were similarly directed against primarily military targets and did not seriously touch residential areas. The pattern of deliberate terror-bombing of cities characterizing the campaign in China was thus not repeated.⁵ The Japanese Army leaders in China had at times felt themselves tactically stalemated, and had been tempted to experiment with bombings designed for persuasive effect rather than military weakening. In the campaigns of rapid, southward expansion immediately following Pearl Harbor, however, there were few "value" targets that would not soon fall into Japanese hands in any event, and there was no lack of "force" targets to keep the Japanese bombers busy. This avoidance of terror-bombings could also induce, in the view of the Tokyo government, a similar discrimination on the part of the Allies, while Japanese tactical successes hopefully would serve to eliminate the Allied bombing capability. The Japanese government had already hinted at a new policy of restraint in August of 1941, promising the United States that it would end indiscriminate bombing in China (a promise not immediately kept, however).⁶

But any such hopes for Allied restraint were, in any event, soon to be disappointed. U.S. projects for an early strike against the homeland of Japan had been under development since well before Pearl Harbor. While

⁴ See Walter Lord, *Day of Infamy*, (New York: Henry Holt and Co., 1957), p. 158.

⁵ See P. M. S. Blackett, *Military and Political Consequences of Atomic Energy*, (London: Turnstile Press, 1948), p. 29.

⁶ *Foreign Relations of the United States: Japan 1931-1941*, (Washington: U.S.G.P.O., 1943), p. 722.

the loss of the bases in the Philippines now forced a shifting to alternative approaches, the relatively discriminate pattern of the Japanese attacks on Anglo-American targets in no way had altered the basic Allied intention to carry through a bombing raid.

Two projects had been set in motion by January of 1942, one programming a group of B-24s, the Halpro force, to bomb Japan from bases in eastern China and the second calling for smaller two-engine Army B-25s to strike at Tokyo from a naval aircraft carrier, and then to proceed on to the same Chinese bases.⁷ The Halpro (Halverson project) attack was delayed, several times, on the long route to China, as its aircraft were diverted to missions in North Africa. However, the B-25 raid on Tokyo, under the command of General James Doolittle, was carried out. Unlike the Japanese raids, the Doolittle strike was planned against military targets in the middle of residential areas, and, furthermore, was initially intended to be carried out by night. The early detection of the U.S. carrier force resulted in a longer-range, daylight attack on April 18, 1942 with the result that none of the B-25s reached their assigned bases in China.⁸

The extreme shock of the Japanese at the attack was signaled in the almost immediate decision to push the Japanese defensive perimeters further out, both in the Pacific and in China, to prevent further attacks on the homeland. In China, an offensive was launched three days after the Tokyo raid to clear out Chekiang and Hiangsi Provinces, thus ending the last possibilities that the Halpro force would be established against Japan.⁹ Japanese intelligence suspected that the Doolittle raiders had come from Midway Island, rather than from the aircraft carriers that had been detected, and that the U.S. carriers had only been intended to supply fighter escorts for the B-25s. The Japanese decision as to whether to attempt the seizure of Midway had been in suspense for a considerable length of time, and the raid on Tokyo was the single deciding factor in the Japanese decision to attack the island.¹⁰

Protesting the Tokyo raid and putting captured American airmen on trial, the Japanese government now contended that it had always maintained

⁷ Maurice Matloff and Edwin Snell, *Strategic Planning for Coalition Warfare 1941-1942*, (Washington: U. S. G. P. O., 1953), p. 139.

⁸ Mark S. Watson, *Chief of Staff: Prewar Plans and Preparations*, (Washington: U. S. G. P. O., 1950), p. 272.

⁹ See Saburo Hayashi and Alvin Coox, *Kogun*, (Quantico, Va.: Marine Corps Association, 1959), p. 49.

¹⁰ Samuel Eliot Morison, *Rising Sun in the Pacific*, (Boston: Little, Brown, and Co.,

an official policy of restraint in bombing (a position that was to be taken again by Japanese defendants in the War Crimes trials after 1945).¹¹

The possibility had not been overlooked in Washington or in Chungking that the first air raid on Japan would alter Japanese war plans. Chiang Kai-shek had been informed of the Doolittle raid only after the carrier force was already at sea, and at this stage had voiced vehement objections, both for fear of Japanese retaliation, and in anticipation of Japanese attempts to gain control of the airfields.¹²

In the United States the possibility of a purely retaliatory strike by Japanese carrier forces against the American West Coast had been foreseen, and in the months following the raid, a U.S. heavy bomber group was held back from the ferry route to Great Britain and dispatched to the West Coast, while the nation was scoured for gas masks to be moved to the Pacific cities.¹³ The fact that the major Japanese countermove would be against Midway and not California became apparent early enough, and a further planned augmentation of West Coast fighter defenses was not completed. Japanese desires for a retaliatory gesture did, nonetheless, require some action against the mainland of the United States, and in September of 1942 a submarine dispatched a seaplane to drop incendiary bombs on the forests of Oregon with the hope that damaging fires and inconvenience would result. Japanese hopes were to be disappointed here.¹⁴

While the re-establishment of a U.S. strategic bombing capability against the Japanese homeland was now to be delayed for several years until the development of the very-long-range B-29, the American intention to pursue some form of air offensive was at no time to lag, and plans were made in the interim to utilize the shorter-range B-17 and B-24. The Japanese advance had now been contained; but a comprehensive decision in 1943 had not yet been reached on the best means of achieving a final Japanese surrender,¹⁵ and early plans for air attack still hinged substantially on the possible painfulness of bombing, which would be

¹¹ International Military Tribunal, *Far East, Record*, (Tokyo 1946-1948), pp. 14662-65, 21373-77, 21507-12.

¹² Louis Morton, *Strategy and Command: The First Two Years*, (Washington: U. S. G. P. O., 1962), p. 271.

¹³ M. Matloff and E. Snell, *Strategic Planning for Coalition Warfare*, p. 225 (cited in ref. 7).

¹⁴ See Mochitsura Hashimoto, *Sunk* (New York: Henry Holt and Co., 1954), pp. 44-45.

¹⁵ Maurice Matloff, *Strategic Planning for Coalition Warfare 1943-1944* (Washington U. S. G. P. O., 1959), pp. 205-8. (Official History, United States Army in World War II Kent Roberts Greenfield, General Editor; subseries, The War Department).

designed at least to remove any Japanese hopes for an easy war, and to carry out the 1941 threats of reprisal. Serious deliberations about the achieving of unconditional surrender were closely tied, as in Europe, to theories on the application of airpower. For any one of the Axis powers to be made to surrender without being invaded, aircraft would have to inflict enough pain to make continued war unprofitable. If an invasion were regarded as necessary, however, considerations of disarming or disabling might take precedence where a choice was necessary.

Plans were now made to expand the United States air effort in China and, having once acquired air superiority there, to begin a regular and persistent assault on the Japanese islands. The decision to try to use bases in China, rather than waiting for island bases to be captured, involved some severe costs in terms of logistics, and illustrated the sense of urgency in getting the war back to Japan.¹⁶ Some other special advantages were also seen to apply, since fears were continually expressed about China's ability to hold on through the war. Bombing of Japan was seen as a morale builder for the Chinese, and as a lever to force the Japanese to divert fighter strength from China back to the defense of Japan. This reasoning was endorsed both by air force planners in the U.S., and by General Chennault in the field. It was supported, moreover, by Generalissimo Chiang, in a position markedly different from his earlier opposition to the Doolittle raids, as he now developed a trust in air forces to win a war for him that his foot soldiers could not.¹⁷

Opposed to these plans was General Stilwell, commander of ground forces in China, who feared that the Japanese might respond to an air threat against the homeland by attempting to seize the airdromes. The step-up of Japanese ground and air activity, thus induced, would increase rather than relieve military pressure, and, in Stilwell's view, would inhibit Allied progress enough to prevent even the launching of any raids on Japan. Stilwell urged the securing of adequate Chinese ground forces as an important preliminary to any air project, since Japanese pre-emptive action was very likely. In Stilwell's words:

Nobody was interested in the humdrum work of building a ground force but me. Chennault promised to drive the Japs right out of China in six months, so why not give him the stuff to do it? It was the short cut to victory.

¹⁶ Wesley Craven and James Lea Cate, *The Army Air Forces in World War II* (Chicago: University of Chicago Press, 1953), V, 13-18.

¹⁷ Charles Romanus and Riley Sutherland, *Stilwell's Mission to China*, (Washington: U. S. G. P. O., 1953), pp. 258-61.

My point was that China was on the verge of collapse economically. That we could not afford to wait another year. . . . That any increased air offensive that stung the Japs enough would bring a strong reaction that would wreck everything and put China out of the war. Witness the Chekiang campaign, brought on by the Jap belief that Tokyo was bombed from bases there. That the first essential step was to get a ground force capable of seizing and holding airbases, and opening communications to China from the outside world.¹⁸

The answer of President Roosevelt to Stilwell's fears was to suggest ignoring entirely the possibility of Japanese escalatory responses to the threat of bombardment. The worst threat that could be posed for Japan apparently had to be posed, and as early as possible; if this threat proved too much for the Japanese to bear, perhaps they would choose, or be forced physically, to surrender. The lesser concession of an easing of the war for the Chinese was apparently to be relegated.

In the actual event, American attempts to win air superiority in the summer of 1943 served only to confirm Stilwell's fears, as the Japanese responded by substantially reinforcing their air strength in China, taking offensive action now to exhaust Chennault's meager reserves before any air raids could be launched against Japan.¹⁹ While Chiang Kai-shek retained his new confidence in air activity as a means by which to expel the Japanese, American plans now turned to the B-29, which would be diverted from the European theater for which it was originally intended; a further delay in the bombing offensive would inevitably be required, however, until the B-29 should at last arrive in quantity.

BOMBING TO FACILITATE INVASION: 1944-1945

The Sextant Conference of November 1943 had still not arrived at any explicit formulation of how Japan was to be forced to surrender, and had left open the possibility that air attack alone might suffice, projecting an invasion of Japan only "if it should prove necessary."²⁰ By the Octagon Conference of the summer of 1944, optimism about producing a surrender by air attack alone had somewhat receded, and a new formulation called for air attack as a preliminary to an invasion—an invasion seen now as indispensable to the securing of an unconditional surrender.

¹⁸ Joseph W. Stilwell, *Papers*, (New York: William Sloan Associates, 1948), p. 204.

¹⁹ Quoted in C. Romanus and R. Sutherland, *Stilwell's Mission to China*, p. 347.

²⁰ U. S. Department of Defense, *The Entry of the Soviet Union into the War Against Japan*, (Washington, 1955), p. 62.

Our successes to date, our present superiority in air and sea forces, and the prospective availability of forces following the defeat of Germany, lead us to believe that our concept of operations . . . should envisage an invasion into the industrial heart of Japan. While it may be possible to defeat Japan by sustained aerial bombardment and the destruction of her sea and air forces, this would probably involve an unacceptable delay. The United States Chiefs of Staff therefore recommend that the overall objective be restated as follows:

To force the unconditional surrender of Japan by:

1 Lowering Japanese ability and will to resist by establishing sea and air blockades, conducting intensive air bombardment, and destroying Japanese air and naval strength.

2 Invading and seizing objectives in the industrial heart of Japan.²¹

As in Europe, therefore, airpower would not yet be trusted alone to secure the surrender, but rather to pave the way for a conventional victory which would produce it. As American precision bombing experience from the European theater was digested, the principle emphasis of the projected B-29 attacks now would go to the disabling of the Japanese military machine, with collateral damage (as in U.S. raids on Germany) still welcome, but largely because it was expected to disable the Japanese by demoralizing them.

The first B-29 raids from China, coming at last in June of 1944, were in fact to be quite spasmodic because of fuel supply problems, delivering only some 800 tons of bombs and penetrating only to the southernmost Japanese island of Kyushu.²² Aimed at industrial targets in the midst of cities, largely by daylight precision attack, these raids were not materially comparable to the later Marianas-based offensive, but they did deeply impress both the Japanese public and leadership that a painful period was in the offing. The Japanese reaction to these raids was again, as Stilwell had predicted, to launch a major offensive to occupy a corridor from Canton to North China, and thereby to close off the bases supporting the raids.

However, when these Japanese offensives had forced the B-29s of XX Bomber Command at last to leave China by January of 1945, locations for bomber bases had already been captured in the Marianas Islands, and XXI Bomber Command had begun its operations against Japan. The awesome significance of the American capture of the key island of Saipan

²¹ Text in *ibid.*, p. 30.

²² Wesley Craven and James Lea Cate, *The Army Air Forces in World War II* (Chicago: University of Chicago Press, 1953), V, p. 749.

had been appreciated in Japan even before this series of raids was begun. The Cabinet of General Tojo had fallen immediately, in July, as the first of a series of steps by which the moderate faction regained control.²³ The ensuing Koiso government, followed by the Suzuki Cabinet in April of 1945, accepted from the start a need to terminate the war. The first of the Marianas-based raids, on Tokyo, symbolically enough, came in November of 1944, and a steady pattern of precision raids, growing in volume as the American forces expanded, continued thereafter.

THE SHIFT TO AREA ATTACK: 1945

Although the B-29, like all the U.S. bombers, had been designed as a precision bomber to operate by day at high altitudes, the planners of the XXI Bomber Command, operating largely on their own initiative in the field under General Curtis LeMay, began to speculate about a reversion to an area attack similar to that of RAF Bomber Command in Europe. B-29s, stripped of their defensive armaments and complicated equipment, might now be used to drop heavy loads of incendiaries from low levels, at night.²⁴

The first, and the fiercest, of these low-altitude area attacks came against Tokyo on March 9, 1945, with 334 B-29s dropping incendiary bombs on the city, killing over 83,000 people, and leveling large portions of the city by fire.²⁵ Since this raid was rated a success, the area offensive was continued, promising to leave no Japanese city standing. Paradoxically, LeMay's headquarters had almost independently reversed bombing policy over Japan, precisely while United States air planners in Europe were still criticizing the British area bombing offensive, and upholding the American reliance on precision attacks as more militarily efficacious and more civilized.

LeMay's decision could be interpreted in several different ways, and was not explicitly in contradiction with the over-all strategic assumption that an invasion of Japan would be required. It could well be argued that the Japanese target complex was so different from that of Germany, with industry intertwined in residential districts, with styles of construction

²³ United States Strategic Bombing Survey, *Japan's Struggle to End the War*, (Washington, 1946), pp. 3-9.

²⁴ W. Craven and J. L. Cate, *The Army Air Forces in World War II*, V, pp. 609-14 (cited in ref. 22).

²⁵ *Ibid.*, pp. 615-18.

that were extremely vulnerable to fire, that a "disabling" counterindustry offensive itself required area bombing, with unavoidable collateral damage to civilians. Low-altitude area bombing by night would allow greater bombloads to be carried in place of heavy defensive armament, at no expected increase in casualties, since effective Japanese night fighters and flak did not exist. U.S. Army Air Force headquarters in Washington had also lost some of its absolute faith in high-altitude precision bombing by 1945, especially when it considered the higher casualties such operations had entailed. A few officers of General Arnold's staff had become outright advocates of an area bombing of Japan, and the ultimate result was that the decision on a change of policy had explicitly been left to the commander in the field.²⁶ LeMay's decision did not, in the end, lack any endorsement from Washington, although more than a preparation for the invasion had come to be involved.

There were in fact many influential American officers, especially in the Army Air Force and in the Navy, who still hoped, even before the atomic bomb was tested, that blockade and conventional bombing alone would force the Japanese to surrender, without any costly amphibious landings in Japan proper. Admiral Leahy, the President's representative on the Joint Chiefs of Staff (JCS), held to this view; General Arnold's staff did also.²⁷ Most important, so did LeMay, who already expressed such assumptions as he launched the first area raid on Tokyo:

If this raid works the way I think it will, we can shorten this war. In a war, you've got to try to keep at least one punch ahead of the other guy all the time. A war is a very tough kind of proposition. If you don't get the enemy, he gets you. I think we've figured out a punch he's not expecting this time. I don't think he's got the right flak to combat this kind of raid and I don't think he can keep his cities from being burned down—wiped right off the map. He hasn't moved his industries to Manchuria yet, although he's starting to move them, and if we can destroy them before he can move them, we've got him. I never think anything is going to work until I've seen the pictures after the raid, but if this raid works we will shorten this damned war out here.²⁸

LeMay's calculations were valid in that a greater disabling impact would be achieved in an area offensive; yet the step-up in suffering inflicted was

²⁶ *Ibid.*, pp. 609-11.

²⁷ See William D. Leahy, *I Was There*, (New York: McGraw-Hill, 1950), pp. 384-85; W. Craven and J. L. Cate, *The Army Air Forces in World War II*, V, p. 625 (cited in ref. 22).

²⁸ Quoted in account of St. Clair McKelway, "A Reporter with the B-29's," *New Yorker*, June 23, 1945, p. 36.

several magnitudes larger, and the hopes for a shortened war expressed by LeMay had to relate to this step-up. Merely to disarm the Japanese would, in any event, not have forced them to surrender prior to an invasion; a continuation of the war, and of bombing, had to be painful to force this kind of capitulation, and the fire raids certainly made the war much more painful. As the offensive rolled on, the possibility had not been overlooked that a choice might have to be made, at times, between the disabling of industry and the infliction of suffering, and Arnold's staff in fact urged LeMay to give terror attacks the priority.²⁹

The area offensive continued to take its toll of Japanese cities, and a serious argument for avoiding an invasion was now pressed in Washington by, among others, the last Ambassador to Japan, Joseph Grew.³⁰ It was felt that a maintenance of existing campaigns, coupled with some explanation of what was entailed in the term "unconditional surrender," might produce a Japanese response much earlier than had been supposed. Japanese attitudes toward the war seemed, perhaps, to leave more opportunity for the coercion of concessions, particularly the supreme concession of a close-to-unconditional surrender. The fanaticism of Nazi leaders had often been described (perhaps wrongly) as leaving the Allied bomber only the functions of a physical weakening of German industry, or of tiring, murdering, or demoralizing the labor force and civil population thereby to induce a civil disaffection from the government). While rebellion seemed even less likely in Japan, the moderate elements of the Japanese government might attach a much higher priority to the physical well-being of the Japanese people; and this motivational consideration would support the technical arguments for an area offensive.

As it happened, the assumptions of this school proved substantially correct. The war had been greeted with enthusiasm in Japan by a public expecting to escape serious punishment. The Japanese plan to attack the Philippines pre-emptively had been intended to prevent an American terror-bombing; the suffering nonetheless inflicted later seriously exceeded the general prewar estimates. The depression of Japanese morale was severe, and the ultimate reaction of a regime quite sympathetic to its people was to surrender. For reasons perhaps cultural, no violent public reaction to the bombings arose in Japan, but rather a more acquiescent suffering, still ultimately unacceptable to the leadership.

²⁹ See W. Craven and J. L. Cate, *The Army Air Forces in World War II*, V, p. 611 (cited in ref. 22).

³⁰ *Ibid.*, p. 644.

President Truman had been induced by Grew to make some explanation of the nature of unconditional surrender to the Japanese, which was delivered on the day after the German capitulation, when the fire raids were also stepped up.³¹ But the general assumption was not relaxed that an invasion was still necessary. Air officers with experience in Europe returned with very pessimistic views on the possibility of inducing surrender by air attack—views that supported those of Generals Marshall and Eisenhower:

General Marshall said that it was his personal view that the operation against Kyushu was the only course to pursue. He felt that air power alone was not sufficient to put the Japanese out of the war. It was unable alone to put the Germans out. General Eaker and General Eisenhower both agreed to this.³²

While General Arnold, the commander of the Army Air Forces, was reluctant to push the contrary view, the surface force commanders in the Pacific also argued that a surrender induced by bombing would be too slow in coming, as in the opinion of General MacArthur:

Course 2 (bombing Japan into submission) if successful would be at a minimum cost of life but would prolong the war indefinitely; would fail to utilize our resources for amphibious offensive movement; assumes success of air power alone to conquer a people in spite of its demonstrated failure in Europe, where Germany was subjected to more intensive bombardment than can be brought to bear against Japan, and where all the available resources in ground troops of the United States, the United Kingdom and Russia had to be committed in order to force a decision.³³

Before the atomic bomb was used and publicized, therefore, only a minority in Washington, together with the Air Force officers in the Pacific, still hoped to skip the invasion. The atomic bomb ended the argument, and since the capitulation the examination of Japanese strategic decision-making has largely settled it in favor of the air attack-plus-blockade position.³⁴

The United States in its conventional B-29 force had, by 1945, developed both a militarily decisive disabling weapon and a motivationally significant terror weapon; the Japanese now possessed neither type of weapon.

³¹ Herbert Feis, *Japan Subdued*, (Princeton, N.J.: Princeton University Press, 1961), p. 16.

³² Text in U. S. Department of Defense, *The Entry of the Soviet Union into the War Against Japan*, p. 80 (cited in ref. 20).

³³ *Ibid.*, p. 56.

³⁴ See United States Strategic Bombing Survey, *Japan's Struggle to End the War*, pp. 9-13 (cited in ref. 23).

Over 160,000 tons of ordinary, nonatomic bombs had been dropped on Japan, killing some 225,000 people and wounding another 640,000, with the preponderant part of all this coming in the war's last nine months.³⁵ Japanese surrender, in preference to continued aerially inflicted privation, was, therefore, very likely even before the atomic bomb; over Japan, the prophecy of the Zeppelin commanders of 1914 was at last realized.

³⁵ Totals compiled from W. Craven and J. L. Cate, *The Army Air Forces in World War II*, V, pp. 722, 725, 749, 754 (cited in ref. 22).

to travel abroad. Many Czechs will jump at this opportunity to fulfill their desire to get away and to be able to do it legally and as part of a patriotic enterprise. However, it is significant that there have been very few reports of technicians who have utilized their stay in underdeveloped countries as a means of permanent escape from Communist Czechoslovakia.

The Communist regime is certainly happy to be able to prove to the Czech people that it is playing an important role in the world. There are many indications that the regime has suffered from its position of inferiority as a satellite of the Soviet Union. Since Czechoslovakia became involved in underdeveloped countries, this has changed. Hardly a month passes without a dignitary from the non-Communist world visiting Prague and paying his respects to the Communist government. Czechoslovakia is respected in Africa. Her flag flies in many countries. Africans take the trouble to study Czech, until recently one of the less important languages in the world. In short, Czechoslovakia is no longer submerged within the Soviet bloc, but is given considerable attention by the non-Communist world. This appeals also to a somewhat traditional, although usually repressed, desire on the part of the Czechs to achieve some measure of greatness to compensate for the unfortunate geographical position that has so long placed them in the shadow of more powerful nations.

Finally, there are economic benefits. Czechoslovakia has received exports of tropical fruits and raw materials in return for her aid to the West African states. Against this gain, however, one must place the heavy burden that Czechoslovakia's extensive aid program puts on the Czechoslovak people. Czechoslovakia often underbids other countries by building projects at what undoubtedly constitutes an economic sacrifice for her. Her programs of economic aid are, after all, determined by considerations of political necessity rather than economic feasibility.

In conclusion, it can be said that Czechoslovakia's involvement in Africa is on an enormous scale if the small size of the country and the limited population are kept in mind. Czechoslovakia is making a major contribution to the Soviet Union's aims vis-à-vis the underdeveloped countries, and the Czechoslovak Communist regime has gained prestige that strengthens its domestic position. Czechoslovakia's increasing contacts with non-Communist states open up possibilities that so far remain in the realm of speculation. In any event, Czechoslovakia's manifold ties with African and Asian states must have an impact on a country that has until recently been almost completely cut off from the outside world.

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BARGAINING AND BOMBING DURING WORLD WAR II IN EUROPE

By GEORGE QUESTER

I. INTRODUCTION

THE Second World War is often regarded as a virtually total conflict, with few mutual restraints to bind the belligerents to less than maximum use of their destructive capabilities. While it is generally remembered that poison gas and bacteriological weapons were not used, these limits are usually cited as great exceptions to the rule. Relatively little notice has been taken of the restraints in Europe on the use of conventional high-explosive and incendiary bombs in aerial bombardment, restraints which remained in effect for an unexpectedly long time after the start of the war.

The most common explanation for restraints shown in war is straightforwardly that many destructive acts do not in and of themselves serve the interests, physical or moral, of the nation capable of them, since interests of nations at war are not all antithetical and therefore no nation destroys as much as it is able to destroy.

Yet such an explanation of limited war would be sufficient only if neither side had made significant assumptions about the motivation of its opponent. The point of view of this article requires an assessment of the bargaining process in which each participant sees value in leaving some "utility" to his opponents, while reminding them of his ability to deprive them of it—a bargaining process which at times in World War II led to serious departures from the pattern of attack that would have been appropriate in the absence of communicated intentions, a bargaining process which at other times had no discernible impact, however, as the participants decided to write off any bargaining gains.

The interaction of "practical" considerations of what type of destruction is desirable in itself, and "bargaining" considerations (potent or neutral) of what behavior might be discreetly impressed upon an enemy, is the determinant of the nature of war in general, and of the air campaigns of World War II in Europe in particular.

II. SEPTEMBER 1939-MAY 1940: THE "PHONEY WAR"

Despite many dire prewar predictions of a total conflict leaving no sanctuary for civilian populations, and despite the existence of a German

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deterrence

force of over 1,100 bombing aircraft and of an Anglo-French force of approximately 1,000, the opening rounds of the Second World War witnessed no bombing raids at all on the populated areas of Germany, Britain, or France.

On the first day of the war, September 1, 1939, President Roosevelt had addressed an appeal to the belligerent powers for a restriction of aerial warfare to strictly military targets, the formal acceptance of which appeal was announced on the 2nd by the Allies, and on the 18th of September by the German government.¹ Yet all evidence indicates that orders to this effect had been issued to each of the air forces in question even before the appeal.

During the German September campaign in Poland, the Luftwaffe was used primarily in close support of army units, or in attacks on the airstrips of the Polish Air Force. A series of attacks was carried out on Warsaw itself in the first week of the war, and again in the final siege of the city, but orders were issued to all crews in the first raids to aim with care at bridges and communications targets, and the bombings of the final siege were explained by the Germans as close tactical support against resisting enemy positions.² *also, used for propaganda as captured & live*

Whatever the implications of the Polish campaign, German operations in the West were limited to reconnaissance flights and to mine-laying and attacks on coastal shipping. Orders to the Luftwaffe in this early period were so strict as to preclude almost any attack which would be likely to result in bombs falling on British or French soil.³ Allied bombers, similarly restricted, conducted only reconnaissance missions, some leaflet raids, and a few attacks on ships and bases of the German fleet. Even the raids made against naval shore bases on both sides were limited to targets well-isolated from populated areas.⁴

The German invasion of Norway in April 1940 saw a use in that country of both bomber forces, again in a tactical role. No expansion of the air war in the West was to occur, however, until the invasion of the Low Countries on May 10, more than eight months after the outbreak of the war.

8mo For these first eight months, then, the exemption from air attack applied not only to the capital cities of Berlin, London, and Paris, but

¹ Charles Webster and Noble Frankland, *The Strategic Air Offensive Against Germany* (London 1961), 134.

² J. R. M. Butler, *Grand Strategy*, II (London 1957), 20; Basil Collier, *The Defence of the United Kingdom* (London 1957), 79; Albert Kesselring, *A Soldier's Record* (New York 1954), 42.

³ Werner Baumbach, *Broken Swastika* (London 1960), 69-70; Adolf Galland, *The First and the Last* (New York 1954), 19.

⁴ Webster and Frankland, 140.

to all other populated areas of the three countries, however close to military or industrial targets.

The Allied decisions in August and September 1939 not to launch a strategic air attack on Germany were based largely on estimates of the capabilities of the German Air Force, estimates which seemed valid at the start of the war, but which have since been shown to be quite unrealistic.

mutual restraint designed to preclude reprisals & escalation
By 1938 the Allies had seen signs of rapid growth in the Luftwaffe, growth by which the Germans seemed to reach parity with, and then surpass, Allied air strength. In the interpretation of this apparent German superiority (the Allies in 1939 rated the Luftwaffe bomber force at 2,100 instead of its actual 1,100), the Allied governments drew upon air-power theory formulated in the years since 1918, and reached truly frightening conclusions as to the peril to which their homelands were now exposed.

Strategic planners in Britain and France between the wars had come to believe that relatively moderate tonnages of high explosives dropped for one or two days on a few large cities (a "knockout blow") would cripple not only a nation's civilian life, but the operation of industry and government, thus imposing strong pressures for a negotiated peace or surrender.⁵ These estimates (traceable in part to the Italian General Giulio Douhet's *The Command of the Air*, which stressed bomber capabilities and treated other forms of air strength as unnecessary)⁶ were thought to be particularly applicable to London in England, and Paris in France, where concentrated, single metropolitan areas held the nerve centers of national political and cultural life, together with a large part of the heavy industry of the country and a good deal of its population.⁷ *propaganda*

In 1920 Lord Balfour estimated that a steady assault of only 75 tons of high explosives a day would quickly make London untenable for both the British government and the civilian population;⁸ as late as 1937, a Joint Planner's Report to the Chiefs of Staff still forecast that 150,000 casualties a week would be suffered by London in an air attack.⁹ The extent to which such extreme conclusions had influenced not only the Allied planners, but also the general public, was illustrated in September 1938, when almost a third of the population of

⁵ Collier, I; Constantine Fitz Gibbon, *The Blitz* (London 1957), 6-8.

⁶ J. M. Spaight, *Air Power and War Rights* (3rd edn., London 1947), 32.

⁷ Collier, 31-32.

⁸ *Ibid.*, 11.

⁹ Webster and Frankland, 89.

Paris rushed to leave the city during the Munich crisis, and when trenches were dug as bomb shelters in London's Hyde Park.¹⁰

Douhet believed, moreover, that the proper counter to such aerial attack was to equip oneself with the better bomber force, and to strike earlier and harder in an "offensive counterforce" sense at the enemy's strategic centers and aircraft industry. In the early 1920's, when Germany had no air force and Britain and France saw themselves as potential aerial antagonists, the calculations of the vulnerability of Paris and London did indeed produce primarily bomber forces in the two countries.¹¹ After 1935, however, the Western planners came to see Germany as the only air enemy, an enemy against which some serious damage could be directed by air raids, but an enemy with enough dispersal of its population centers to preclude a "knockout blow." The "knockout blow" against London or Paris was still, however, to be feared.

The apparent rapid growth of the Luftwaffe, coupled with this belief in an inherently lesser vulnerability of Germany to a "knockout" attack, had led the RAF in 1938 to reverse its bomber emphasis of the interwar period, and to begin frantically building up its fighter forces. The French Air Force over this period, hamstrung in its modernization program by a series of political crises, not only ceased to develop its strategic bomber forces, but gained no compensating strength in its air defenses.¹²

The Allied leadership thus was left in 1939 with a serious apprehension about the effects of German bombing, and with no matching confidence in the ability of Allied bombers to destroy the German capability for air attack. Allied offensive attacks did not promise to save London and Paris, defensive measures seemed able to help these cities only to a slight degree, and the holding of German population centers as intact hostages appeared to be the sole possible means of sparing them. The British and French governments therefore saw the gains of restraint, the avoidance of horrible destruction to their cities, as outweighing the costs, the missed opportunities for a strategic weakening of Germany; no reversal of this opinion was to take effect until May 1940.

The German decision, on the other hand, to hold back the Luftwaffe in 1939 stemmed from calculations quite different from those of Chamberlain and Daladier. The German Air Force, unlike those of Britain and France, seems never to have really accepted Douhet's theories on the omnipotence of the bomber; and, except during the short tenure of General Walther Wever (killed in a crash in 1936), the Luftwaffe

¹⁰ John Wheeler-Bennett, *Munich: Prologue to Tragedy* (New York 1948), 11.

¹¹ Collier, 15. ¹² Butler, 33.

did not seek to develop a true long-range, high-payload, strategic bombing aircraft.¹³ Despite its independent status and a tendency to revel in its aerial accomplishments, the Luftwaffe was in fact satisfied with the functions of close support to the ground forces and the maintenance of tactical air superiority, the precise functions which Douhet (and his disciples) tended to regard as superfluous.¹⁴

As the German leadership did not believe in the feasibility of the "knockout blow" against its enemies, it similarly did not fear any such blow against Germany. Yet Hitler was nevertheless very anxious to avoid any bombing of Germany at all, not for fear of the total breakdown envisaged in London and Paris, but because of his personal desire to spare Germany all possible wartime hardship, and because of a fear that the enthusiasm of the German people for his regime might not survive the rigors of war. Hitler's policies on production of consumer goods, on the mobilization of women, and so forth, all show his great unwillingness to impose a real austerity on Germany, and his aversion to an aerial exchange of strategic attacks sprang from the same motive.

Apart from this desire to avoid an assault on Germany, Hitler for the first two months of the war also still cherished the hope of a negotiated peace with France and Great Britain, on the basis of the *status quo* achieved in the East, thus additionally precluding a Luftwaffe offensive which might further antagonize the Allies.

Anxious, therefore, to avoid an actual exchange of blows, the German leadership strove to build up the deterring fears of the Allies, fears which the Luftwaffe did not feel itself capable of fulfilling.¹⁵ The Germans were, however, not averse to additionally exploiting such fears for lesser purposes, and the successive take-overs of Austria, the Sudetenland, and Bohemia-Moravia all involved subtle references by Goering and others to the possibility of "total destruction" raining down from the air, if German demands were resisted.¹⁶

Thus we find the German leadership, down to September 1939, playing the somewhat dangerous game of bluffing a course of action which at all costs it wanted to avoid, a bluffing based on the exaggerated fears of its opponents. Hitler saw little possibility of victory in an aerial assault on the population centers of the Allies and, for several reasons, he was extremely reluctant to have his own population centers bombed.

¹³ Telford Taylor, *The March of Conquest* (New York 1958), 24.

¹⁴ Derek Wood and Derek Dempster, *The Narrow Margin* (London 1961), 44-45.

¹⁵ Walter Ansel, *Hitler Confronts England* (Durham, N.C., 1960), 192-93.

¹⁶ J. M. Spaight, *Bombing Vindicated* (London 1944), 18.

end of
lull

Hence German policies emphasized air defense and ignored long-range bombers; hence the German Air Force did not initiate attacks on Allied cities in 1939.

III. MAY 1940-JUNE 1940: THE DEFEAT OF FRANCE

✓ The German attack of May 10 on Belgium, the Netherlands, and Luxembourg, with its ensuing offensive into France, saw the use of the Luftwaffe in a role similar to that played in Poland, aiming to destroy opposing air forces, achieve air superiority, and give tactical support to the army. On the 14th of May, in the confused fighting around Rotterdam, a force of dive bombers destroyed a considerable portion of the city, which was again, however, explained by the Germans as a tactical move against a defended town (although some of the more bombastic German propaganda was not so careful to indicate circumscription).¹⁷ No clear deviation from the pattern of tactical bombing on the German side was in fact ordered, as the German forces rolled rapidly westward through Belgium to the Channel. In the period up to the French surrender on June 17, Paris itself was not bombed, targets elsewhere in France of a non-military nature were generally spared, and only a very few raids were made on Great Britain, raids generally limited to RAF fighter strips in southeastern England.¹⁸

✓ On May 15, however, the day after the bombing of Rotterdam, RAF Bomber Command had received orders to start striking at targets in northwestern Germany, orders which were to change from day to day as the Allied position in France collapsed. In the period up to the French surrender, raids were alternately conducted on German ground forces, on the German synthetic oil industry, on communications links from Germany to the front, and on various other "panacea" targets in the Ruhr. The bombing of Germany itself was therefore not a sustained or heavy effort, and specific objects of military significance were always the target; the attacks were, however, conducted at night and on targets close to or in cities, thus subjecting the civilian population of portions of northwestern Germany to their first bombardment. No raids were conducted as yet against Berlin, or against other cities in the east of Germany.¹⁹

With the Allied evacuation of Dunkirk and the French surrender, German air activity came to a pause, and the British effort was predominantly, although not completely, pulled away from targets in Germany and directed against the coastal and shipping facilities needed for a

¹⁷ Kesselring, 57.

¹⁸ Collier, 156.

¹⁹ Webster and Frankland, 148.

German invasion of Britain. The French Air Force had been limited throughout the campaign to giving close support to the Allied ground forces, and no French strategic raids were launched against Germany. With the entry of Italy into the war in June, the French government in fact prevented British "Haddock Force" bombers from leaving bases in southern France on raids into northern Italy.²⁰

By June, Paris and northern France were occupied, and southern France was out of the war. London and the other large British cities, however, had not yet been subjected to bombing, while Berlin and most (but not all) German cities still enjoyed a similar dispensation. Those cities of Germany which had been attacked had not been heavily bombed as yet, and the attacks had not inflicted maximum damage on them. The air war had lost a participant, but it was still far from unlimited.

* reason for German restraints German fear of reprisals
The German restraints observed throughout the campaign in the Low Countries and France demonstrated a continuing German desire to impress distinctions on the Allies which would prevent a heavy assault on German cities—a desire which at times however was crossed by the irresponsibility of German propaganda agencies, and by the inherent haziness of the distinction between tactical and strategic operations. NO

It was the case, moreover, that Hitler again had high hopes of negotiating an end to the war with Britain after the defeat of France, and that he hoped to make such a settlement easier by showing restraints in his conduct of the campaign. It was possible that the possession of intact cities might make the British feel that they had more to gain by a peace. The restraints shown in the sparing of French cities similarly served to give the French a stake in an early surrender, a stake which the Luftwaffe could easily deny them if it desired, but which would be retained by a speedy French capitulation.

The extreme British fears of a "knockout blow" had however been considerably moderated over the period of September 1939 to May 1940, as civil defense and air defense preparations in the United Kingdom began to show some progress, as newer and more sober estimates were made of the nature of aerial bombardment, as new perils arising for Britain tended to reduce the relative importance of the aerial threat, and as Winston Churchill replaced Chamberlain as the British Prime Minister.²¹

²⁰ Denis Richards, *Royal Air Force, 1939-1945*, 1 (London 1953), 146.

²¹ Butler, 211.

A segment of the RAF Air Staff moreover still felt (as it had before the war) that significant results might be achieved by a precision assault on a few "key" targets in Germany; these planners had continued to press for permission to begin such an offensive, to put Bomber Command to some use at last.²² The fate of Rotterdam and the ambiguity of German declarations about this instance of bombing moreover reduced British prospects of being forever spared; in view of the German successes on the ground, it was felt that it might, in fact, be advantageous to bait the Luftwaffe onto military targets in Britain (thus easing pressure on the forces in France, and bringing to action those RAF fighter squadrons which had in any event to be held in Britain).²³

For all these reasons, the order to commence a program of "precision" night bombings of military and industrial targets in Germany was given on May 15. The British had not yet lost all hope of being spared severe bombardment of their cities, nor had they decided to end all their self-restraints; the prospect of German bombardment had merely become a less terrifying one, while the hope of avoiding it was no longer as bright, thereby making lesser British restraints now seem appropriate. The exemption of Berlin from attack was still maintained, in hope that London might yet be spared and in face of the physical disadvantages of long-range strikes against eastern Germany. While it was thought necessary to attack by night to avoid high casualties, it was still intended that target discrimination would be practiced; the extent to which inaccuracies at night would weaken this distinction in the eyes of the attacked country was not appreciated (an error which was to be repeated by both sides at several more critical points in the exchange of blows).²⁴ *intention vs perception **

Until the very surrender, the French government still lived in real terror of the fate that might befall its undefended and unprepared cities, and the British raids on Germany throughout the campaign were conducted against French desires.²⁵ The projected raids against northern Italy were thus forcibly stopped by the French to prevent a feared massive Italian retaliation against Nice and Marseilles.

IV. JUNE 1940-AUGUST 1940: THE BATTLE OF BRITAIN

Through the early phases of the Battle of Britain, RAF Bomber Command was directed in large part against the German airstrips in France and the German shipping being assembled on the coasts facing England.

²² Webster and Frankland, 244.

²⁴ Webster and Frankland, 145.

²³ Fitz Gibbon, 42; Richards, 122.

²⁵ *Ibid.*, 143; Richards, 111.

and only to a smaller extent against the targets of the Ruhr valley and northwestern Germany. Raids against Germany were generally conducted at night, but still with some attempt to emphasize military and industrial targeting and to avoid civilian casualties. No raids at all were made on Berlin or on cities without industrial significance.²⁶

German air activity from June 17 to July 10 limited itself to a series of minor probing attacks, of which the targets usually were British airdromes. On July 10, however, there began a heavy assault on English coastal shipping which was to continue until August 12, when the massive attack shifted to airdromes and, for the first time, to plants of the British aircraft industry.²⁷ Thus while the British public still was spared serious exposure to attack, it had become more exposed after the 12th, as the Luftwaffe not only went after RAF stations (most, but not all, of which were away from built-up areas), but also after aircraft factories, many of which were in or near population centers. The Luftwaffe's attacks continued to be made primarily by daylight up to the 24th of August, and aimed quite specifically at precise targets which would contribute to the achievement of air superiority over the RAF.²⁸

While Germany thus continued to be spared the bombing of its capital and to be subjected only to minor attacks on a few of its population centers, Great Britain was undergoing a very intense assault on the supporting facilities of its air force, which nonetheless still left most of its population centers, particularly London, unscathed. The German assault, moreover, was being carried out so as not to inflict serious civilian casualties even in the area of attack.

The German victory in France had brought the threat of occupation to Britain, a prospect which made safety from aerial bombing seem a minor question. While the moderate British campaign of night attacks against Germany continued to observe rules of discriminate bombing, the incentive for such limits came thus to rely less and less on bargaining considerations relative to the safety of British cities, and more simply on the high practical results the target selectors continued to expect from attacks on "key" industries. The German invasion threat had not yet removed all significance from mutual aerial restraints for the British, but it had again seriously reduced this significance.

The lull in the German air effort illustrated Hitler's continuing desire for a negotiated peace. The abandonment of such hopes and the decision to prepare for an invasion of Britain produced a vast Luftwaffe effort aimed at the achievement of air superiority over the RAF, an

²⁶ Webster and Frankland, 148.

²⁷ Collier, 450-59.

²⁸ Wood and Dempster, 220.

? when did the switch from day to night?

achievement regarded as the *sine qua non* for a successful invasion.²⁹ The initial massive attacks on shipping thus were planned primarily to force the RAF into a battle which would exhaust most of its strength; the subsequent shift to the airdromes and facilities of Fighter Command, and to the aircraft industry, was designed to complete this attrition process.³⁰

The care nonetheless shown to limit civilian damage in this German operation still stemmed significantly from hopes for a similar discrimination in RAF attacks on Germany, and, in addition, from a new desire, perhaps, to preserve the shock of a "terror" assault for the most strategic moment on the day of the invasion. If and when prospects of a German conquest of Britain appeared bright, the dangers of a prolonged RAF retaliation would disappear, and the temptation to treat Britain as one more "tactical area" open to bombing would be great.

For the period of the Battle of Britain, however, the intention remained in effect that Luftwaffe air supremacy should be won without harming the "hostages" of London and other British cities. Losses to the Luftwaffe proved to be considerably higher than had been expected, and higher than those of the RAF; yet the precise, daylight attacks on RAF bases began to show results, threatening to destroy the communications net which had given Fighter Command advantages compensating for its numerical inferiority.³¹

Thus, as the Luftwaffe displayed a discretion in its choice of targets in Britain, a threat of German tactical victory in the air arose; yet the danger of such a German victory rapidly was making this German discretion worthless to the British.

V. AUGUST 1940-MAY 1941: THE "BLITZ"

On the 24th of August 1940, the Luftwaffe, still concentrating its daytime attack on the installations and supporting industries of the RAF, added a series of night attacks on industrial targets in cities around England.³² Although London was not programmed as a target, navigation and accuracy inevitably suffered at night, and several planes did drop their bombs unintentionally on London on the 24th (London had, in fact, been accidentally bombed before, as early as the 18th of June).³³ The extension and change in form of the Luftwaffe raids thus once more increased the exposure of the British populace to aerial attack, if

²⁹ Drew Middleton, *The Sky Suspended* (New York 1960), 35.

³⁰ Collier, 234.

³¹ Middleton, 148; Peter Wyckham, *Fighter Command* (London 1960), 114.

³² Collier, 203; Richards, 171. ³³ Collier, 207.

only because of the lesser accuracies of night bombing, but as yet no serious raids had occurred on the London area, or on targets not having industrial or military significance.

On the 25th of August, however, 95 aircraft of Bomber Command were dispatched on the first strike against Berlin (of which 81 found the target), a strike executed as usual by night, intended nonetheless to be precision bombing of industrial targets.³⁴ Berlin was now placed on the regular target list alongside the invasion ports and the Ruhr.³⁵

On the 7th of September the Luftwaffe halted most of its attack on the airdromes and began a heavy assault on the city of London, an assault which was to continue for two months, until the middle of November.³⁶ While the orders to the German crews were to bomb carefully and not indiscriminately, the sheer weight of the night attacks tended to mitigate the effects of such orders.³⁷ After the 14th of November, attacks were extended again to areas outside of London, targets and aiming points still being chosen for industrial potential, the opening of the new phase being a severe raid on Coventry.³⁸ Intensive raids alternating between London and the lesser cities of Britain continued through the winter and spring, until the middle of May 1941.

Over the period of the "Blitz," Bomber Command continued to hit an assortment of targets, including the Ruhr, northern Italy, Berlin, invasion shipping, German naval bases, and various special industrial sites around northwestern Germany. On October 30, 1940, it was decided, moreover, to seek targets with a supplementary effect for stray bombs—i.e., targets surrounded by populated areas.³⁹ On December 12 an attack experimentally designed to inflict maximum destruction on a German town was ordered, the "area bombing" attack being executed on Mannheim on the night of the 16th, with disappointing results.⁴⁰

Early 1941 saw attacks on German U-boat bases, and another area attack on Bremen, followed through the rest of the spring by similar attacks on a series of German North Sea ports. Yet as British bomber forces were drawn away to the Middle East and to anti-submarine patrols at sea, the British failed to match the bombing tonnage of the German assault.⁴¹

The winter of 1940-1941 thus saw all possible military and industrial targets opened to attack in both Britain and the Axis homelands. No deliberate "terror-maximizing" attacks had as yet been launched against

³⁴ Arthur Bryant, *The Turn of the Tide* (London 1957), 213; Collier, 234.

³⁵ Collier, 235. ³⁶ *Ibid.*, 234-61.

³⁷ Ronald Wheatley, *Operation Sea Lion* (Oxford 1958), 78.

³⁸ Richards, 211. ³⁹ *Ibid.*, 231. ⁴⁰ *Ibid.*, 234.

⁴¹ Arthur (Lord) Tedder, *Air Power in War* (London 1947), 106.

Britain, and only a few with limited resources had as yet been launched against Germany, but the inaccuracies of navigation and bombardment on night flights made the results of "terror" attacks seem not very different from "discriminate" or "precision" attacks.

Winston Churchill in his memoirs cites the bombs dropped on London on August 24 as his moral justification for the Berlin raid of the 25th, and he moreover indicates that he expected a serious German assault on London sooner or later in any event: "The sporadic raiding of London towards the end of August was promptly answered by us in a retaliatory attack on Berlin. . . . He [Hitler] took, of course, full advantage of our reprisal on Berlin, and publicly announced the previously settled German policy of reducing London and other British cities to chaos and ruin."⁴²

Yet the accidental nature of the bombings of the 24th was fairly clear, and a serious German attack on London in the absence of provocation could by no means be a certainty for Churchill. There was therefore a reason why Churchill took the step which indeed made an early German assault on London more likely, and it was not simply a moral need to retaliate for the stray bombs that had fallen:

Far more important to us than the protection of London from terror-bombing was the functioning and articulation of these airfields and the squadrons working from them. In the life-and-death struggle of the two air forces, this was a decisive phase. We never thought of the struggle in terms of the defense of London or any other place, but only who won in the air.⁴³

The War Cabinet were much in the mood to hit back, to raise the stakes, and to defy the enemy. . . .⁴⁴

It was therefore with a sense of relief that Fighter Command felt the German attack turn on to London on September 7, and concluded that the enemy had changed his plan.⁴⁵

The night attacks on London for ten days after September 7 struck at the London docks and railway centres, and killed and wounded many civilians, but they were in effect for us a breathing space of which we had the utmost need.⁴⁶

In fact, Churchill's decision to bomb Berlin almost certainly was a conscious effort to bait Hitler into an immediate shifting of the Luftwaffe attack onto London, away from the RAF Fighter Command bases, which were beginning to collapse under the strain. The decision

⁴² (Sir) Winston Churchill, *The Second World War*, II (Boston 1949), 342.

⁴³ *Ibid.*, 330-31. ⁴⁴ *Ibid.*, 342. ⁴⁵ *Ibid.*, 331. ⁴⁶ *Ibid.*, 332.

was made in the context of the threat of a German invasion, which was indeed expected momentarily.⁴⁷ A continuing Luftwaffe assault on the airdromes threatened not only to weaken the bases as flying strips, but also to destroy enough on-base communications and control centers (the "Sector-Stations," which digested radar information and guided the fighter groups in the air) to make southern England untenable for the RAF. A withdrawal of the RAF to the north would have given the Luftwaffe the superiority it needed over the Channel to support an invasion.⁴⁸

Churchill's assessment, therefore, of the value of sparing London from attack may not have declined seriously from May to August, but his estimation of the value of inducing Hitler to bomb London instead of the airdromes had indeed risen. Churchill admits his desire in late August for an immediate shifting of the Luftwaffe offensive from the RAF airstrips to London, and he admits his personal responsibility for the August 25 bombing of Berlin; he could hardly deny an awareness at the time of the likely connection between the two.

The German reaction to the attacks on Berlin was not long in coming. Hitler had desired to deter all air attacks on German cities, and he had by his restraining directives to the Luftwaffe been bargaining since May for an end to the Bomber Command offensive. As the program of conquering Britain got under way, some of these restraints began to be deferred (at least for a time) to the requirements of winning superiority over RAF Fighter Command, and the decision prior to the 24th to open a German night offensive was such a deferment. Yet a great deal of the bargaining restraint was still in effect; Berlin, in particular was of great value to Hitler, for while the minor raids being executed in the Ruhr could be ignored or explained away, a bombing of Berlin would spoil completely the illusion of "perfect safety" for the German people, an illusion for which Hitler still showed himself willing to spare London. While the attack on the German capital was not the only factor in the assault on London, it was therefore the critical factor, and Hitler made his decision on the morning after Berlin was bombed.⁴⁹

Since the real weakness of Fighter Command was not, however, known to the Germans, the decision to bomb London cannot be viewed merely as an instance of the revenge motive (or "punishing of a contract-breaker") irrationally overriding all other practical considerations. The Luftwaffe was not, in fact, aware of the critical state of Fighter

⁴⁷ Alexander McKee, *Strike from the Sky* (Boston 1960), 221.

⁴⁸ Middleton, 148. ⁴⁹ Wykesham, 127-28.

Command's communications, and it had only "accidentally" been destroying the "Sector-Station" communication centers in its general bombardment of RAF airdromes.⁵⁰ The invasion of Britain still was pending, still requiring the achievement of air superiority over the coasts, but the Luftwaffe command was far from agreed on tactical policy at this time; some planners had been advocating raids on London as a means of forcing a British commitment of Fighter Command's remaining reserves, while others urged a continued bombing of the airdromes to catch fighters on the ground.⁵¹

By removing the sparing of Berlin from the German prospects, Churchill tipped the scales in the multi-elemented German calculations and induced a shifting of attack which spared Fighter Command. By exposing London to attack, he led the Germans to see a net advantage where they did not have one, and to miss the real opportunity available to them.

The German motives in continuing the bombing of London, after the "Operation Sea Lion" invasion plan was finally given up on September 17, hinged on the possibility (now, for the first time seriously considered by the Luftwaffe) that air attack alone might induce the British to surrender. Yet this assumption was accepted only with strong reservations, reservations which in fact required that bombing continue to be programmed for industrial targets, regardless of what effects on the national will were expected, reservations which moreover still required the attack to be categorized as a non-terror, non-civilian assault,⁵² for fear of British retaliation.

The British reaction, however, to the heavier bombings (especially of London and Coventry) was to interpret them nonetheless as equivalent in effect to all-out terror attacks, which seemed to leave little prospect of gain in any RAF restraints.⁵³ At about the same time (through reasoning processes which now seem slightly suspect) British target planners began to speculate that German morale might be a key target whose significance had previously been overlooked, and that an area bombing offensive might be more effective than a precise attack, on purely practical considerations. This conclusion, still quite tentative, stemmed partially from the disappointing accuracies shown in missions against precise targets, and also from a flood of advice from sources as remote as President Roosevelt and the propagandist Vansittart, maintaining that German morale would never equal the performance of the British under the Blitz, and that heavy bombing of the German popu-

⁵⁰ McKee, 152.

⁵¹ Collier, 233.

⁵² *Ibid.*, 233, 261.

⁵³ Kesselring, 80.

lace might lead to a breakdown of German civilian life, or even to a revolt.⁵⁴

Yet British capabilities were still so limited as to preclude any really effective "terror raids," and the paradoxical result was that neither side correctly interpreted the other's intentions of attack in 1941, the German "limited" attack being not seen as such in Britain because of its inaccuracy by night, and the British "terror" or "area" attacks being misinterpreted because of their weakness.

The Blitz represented the end of effective bargaining on the question of aerial bombardment, for while certain later German moves might possibly be interpreted as "feelers" aimed at re-establishing limits to the exchange, September 1940 marked the end of British desires for such limits. A bargain, to be consummated, requires that both partners see themselves as better off by it; in September 1940 this had ceased to be the case.

VI. MAY 1941-FEBRUARY 1942: THE LULL

In the middle of May 1941, as new theaters of operations opened in the Balkans and in Eastern Europe, the German assault on Britain quickly tapered off. Over the period of June 1941 to February 1942, the Luftwaffe contented itself with a series of probing attacks and reconnaissance flights, coupled with an occasional retaliation raid for attacks by Bomber Command—a raid on London on the 28th of July, for instance, being explicitly announced as the reprisal for an RAF raid on Berlin.⁵⁵

Bomber Command continued its program of strikes against various targets on the Continent, still changing objectives often, still varying between precise and area targets, and occasionally even attempting daylight attacks. Yet the level and intensity of the assault were slow to rise, and heavy casualties between August and November led to a decision on November 13 to reduce the level of raids until larger forces had been accumulated.⁵⁶

With the RAF raids on Germany thus curtailed by a conservation program, few Luftwaffe sorties were flown against Britain. Bombing activity, which had been light over the period from June to November 1940, thus became very light from November to February, and what had seemed to be an impending exposure of all the civilian population of both sides to severe aerial bombardment failed to materialize.

⁵⁴ Webster and Frankland, 169.

⁵⁵ Collier, 300.

⁵⁶ Webster and Frankland, 186.

Bomber Command's offensive in the summer and fall of 1941 had been limited in size and scope only by technical capacity; yet the British inability to mount severe raids into Germany in fact led Hitler to see supplementary advantages in the restricted air activity imposed on him by the Russian campaign. It is likely that Hitler saw himself as the beneficiary of voluntary British restraints during the latter portion of 1941, and that he was in fact overestimating the technical ability of the RAF to mount an offensive at this time.⁵⁷ Luftwaffe assaults on Britain in late 1941 were limited to reprisal attacks designed to give an impression of precise reciprocity for British raids on Germany, and thereby perhaps to continue a deterrence of such raids.

There is no evidence to indicate that the Luftwaffe lull or the reprisal raids had any actual deterring effect on the British leadership. German radio broadcasts about "reprisal raids" were often interpreted simply as morale boosters for the German people,⁵⁸ while the lull in the Luftwaffe attack on Britain was attributed entirely to a German overcommitment to the Russian front. The possibility that the Germans were (or would be) exercising restraints was given little credence, and the failure of the RAF to go over completely to area bombing was due only to a few lingering uncertainties as the form of attack offering the greatest practical results.

VII. FEBRUARY 1942-MAY 1945: THE ALL-OUT FINALE

On February 14, 1942, orders were issued to Bomber Command to embark on a new offensive, of which the primary target would now be the morale of the German people.⁵⁹ "Area" or "morale" bombing had several times been tried by the British before (and often, perhaps unintentionally, accomplished by both sides); it now was to become a general policy, drawing the largest part of Bomber Command's tonnage from 1942 to 1945.⁶⁰

The offensive began with a series of attacks on the Ruhr city of Essen between March 8 and 10, followed on the 28th by a spectacular fire raid of 200 bombers on the old German port of Lübeck. From here the offensive grew almost continuously, with raids occasionally of more than 1,000 aircraft, the growth of the area assault being limited only by technical or meteorological obstacles, by a diversion to French rail-

⁵⁷ Collier, 300.

⁵⁸ Alexander George, *Propaganda Analysis* (White Plains, N.Y., 1959), 118.

⁵⁹ Denis Richards and Hilary St.G. Saunders, *Royal Air Force, 1939-1945*, II (London 1954), 118.

⁶⁰ U.S. Strategic Bombing Survey, *Description of R.A.F. Bombing* (Washington 1945), A-2.

ways in 1944 and, to a limited extent, by some renewed efforts at night precision bombing in 1944 and 1945 (based on new night navigation devices).⁶¹ No longer would a city in Germany be spared because of its remoteness from clearly military targets, no longer would specific targets in large cities be aimed at, rather than the city as a whole, and no longer would Bomber Command's offensive be so limited in volume as to make such distinctions imperceptible.

The Luftwaffe was ordered on April 14 to begin a series of reprisal raids calculated to inflict maximum suffering on the British population, aimed at militarily insignificant towns of great historical or cultural value.⁶² These "Baedeker raids" continued into the summer of 1942 (with one more October raid, on Canterbury), but the Luftwaffe was unable to match the tonnage of the greatly augmented British effort.

Despite the intensity of the RAF raids on other German cities in 1942, the assault on Berlin was not resumed until January 1943, whereupon the Luftwaffe replied with an attack on London and another series of scattered raids lasting into May. On January 27, 1943, daylight bombers of the United States Army Air Force had made their first attack on Germany; the weight of this American assault, directed usually against precision targets, and only occasionally at area targets, was to be a substantial addition to that of Bomber Command for the rest of the war.

On July 24 began the massive RAF fire raids on Hamburg, which did an unprecedented amount of damage to the town over the next four days.⁶³ Luftwaffe reprisals were weak during the last half of 1943, but early in 1944 there began a series of relatively effective night assaults on London (the "Baby Blitz"), which continued into May. The first V-1 bombs aimed at London were launched on June 10, 1944, the first V-2's on September 8, both these unguided, random weapons being again openly labeled as reprisal weapons.⁶⁴ From February 1942 on, in fact, the German government frequently stated that Luftwaffe attacks on Britain were to be considered as retaliation for the Allied air offensive. Evidence moreover indicates that discreet efforts were made by the German Foreign Ministry to seek some mutual limiting of attack through contacts in neutral countries, with apparently a total lack of success.⁶⁵

⁶¹ U.S. Strategic Bombing Survey, *The Effects of Strategic Bombing on the German War Economy* (Washington 1945), 2.

⁶² Collier, 305.

⁶³ Hilary St.G. Saunders, *Royal Air Force, 1939-1945*, III (London 1954), 7.

⁶⁴ Collier, 367, 406. ⁶⁵ Ulrich von Hassel, *Diaries* (Garden City, N.Y., 1947), 351.

The Anglo-American bomber offensive, while occasionally diverted to V-1 or V-2 launching areas, rolled on uninhibited until April 1945, when the entry of Allied ground forces into Germany began finally to limit the choice of targets.

The period from 1942 to 1945 thus saw an Anglo-American offensive based exclusively on estimates of direct practicality, with no departures therefrom for purposes of bargaining or deterrence. British planners tended to view the Blitz as the worst punishment the Germans could have inflicted, a punishment which was far less severe than had been expected, a punishment which was not likely to be negotiable with Germany, and, at any rate, a punishment which could be absorbed again in the future as the price of great strategic advantages (such as the advantages now definitely seen in an area offensive against Germany).

The form of the Baedeker raids constituted a warning to Britain that the Blitz could have been more painful and could be reproduced in a worse form in the future. The Baedekers had not been convincing, however, for while more sensitive targets were aimed at, smaller tonnages were delivered, and the suffering of Britain's populace was considerably less in such "terror" attacks than it had been in the "discriminate" Blitz.

All the bargaining actions of the rest of the war thus came from the German side. The German broadcasts, dismissed in the West as propaganda; the attempts at negotiation in neutral countries; the failure to bomb London during the Baedekers, until 1943 when Berlin was again bombed; the "Baby Blitz" on London in 1944; and the V-bombs—all these constitute actions appropriate to some form of deterrence, rather than to strictly physical goals. All of these attempts at deterrence were to fail, however, for lack of awesomeness, if for no other reason.

VIII. CONCLUSIONS

In the early stages of the Second World War a long series of limits to aerial warfare was proposed on both sides, by word and, often more significantly, by deed. Of these, some were accepted, some were not recognized, and some were rejected. Rated roughly in order of stringency (although not in order of precision or intelligibility), they ran: "no air raids at all," "air raids only on targets away from civilian population," "attacks only on tactical targets," "attacks only on military and industrial targets, by day," the same "by night," and "no raids on national capitals."

The extent to which the mutual recognition of such limits was due to prior deliberations and declarations is not easy to determine. Various proposals for rules of aerial warfare had been put forward (but never ratified) at the Hague in 1923, and at the Washington Disarmament Conferences, generally making only the distinction, however, between "strictly military" targets and targets close to civilians, which were not, therefore, "strictly military."⁶⁶ Hitler himself had in 1935 proposed limits to the areas open to aerial bombing, such as the area of "tactical combat" or, more specifically, the area within the range of both sides' artillery; at other times the Führer alluded to a total abolition of aerial bombing to be agreed to by all sides.⁶⁷

Yet while the "words" of the prewar period may account for the general intelligibility and acceptability of certain distinctions of limitation, others, such as "no capital cities" were simply evolved in practice, being communicated and accepted by "deeds."

It is probably fair to say that Nazi Germany had an interest in limits on aerial warfare for a longer period than did the Allies. For reasons of genuine lack of opportunity, or for failure to see opportunity, the German leadership did not count on winning its war by aerial bombardment, and with its strong aversion to domestic austerity it preferred a limited air war instead. It may be the case that Germany could not have overcome the handicap in aircraft development and production imposed prior to 1935 by the Versailles Treaty, without giving up the heavy bomber; it may also be true that Germany completely missed the significance of the bomber. In any event, Germany desired limits; but, unfortunately for the Germans, their bargaining for such limits was poorly executed in several respects.

German propaganda under Goebbels was not fully harnessed to the task of communicating the nation's intent; Luftwaffe complaints of misinterpretations and distortions of its campaigns were recurrent, and on crucial questions of fine distinction, such as Warsaw and Rotterdam, broadcasts threatening other cities with similar imminent fates served to undermine the general German purpose. The deliberate prewar tendency (in pursuit of lesser objectives) to threaten all-out air attack if German wishes were not granted, similarly made ambiguous the wartime German intention to abstain from such attack except in retaliation.

Beyond the distortions of propaganda, however, the Germans chose rather incautiously at several points to interpret borderline opportunities in their own favor, opportunities which might not appear so "tactical" or "strictly military" to the other side. For a nation as averse

⁶⁶ Spaight, *Air Power and War Rights*, 101.

⁶⁷ *Ibid.*, 102.

to bombing as Germany, the severity of the final raid on Warsaw and the dive-bomber attack on Rotterdam were precarious moves, as was the decision to add a night offensive against Britain, based, as it was, on a serious overestimate of bombing accuracy.

Thirdly, if the Germans really hoped thus to limit the war, it would seem that a careful measure of the values of the opponent should have been taken before threatening its very existence. While France proved willing to surrender before expanding the air war, Britain preferred, under Churchill, to drop limits when the national existence was threatened, and when a dropping of such limits offered a contribution to survival. By threatening to invade Britain, Germany exposed herself further to air assault.

Finally, to the extent that a German ability to limit the war depended on inflated foreign beliefs in the awesome capabilities of the Luftwaffe, it was unwise to demonstrate how limited these capabilities were. It seems very likely, for instance, that if the British had known what the Blitz would be like, they would not in 1939 have been restrained by fear of a "knockout blow."

The severity of the later Allied air offensive came as a surprise to Hitler, although it was still not a "knockout blow." Perhaps the German aversion to air attack would indeed have been fortified if there had been foreknowledge of its actual severity, and perhaps the bargaining for limits might then have been conducted with more care. As it was, the Germans did seek limits fairly consistently, but also quite ineptly.

In the Allied calculations after 1940 relative to aerial warfare, the fruits of bargaining were regarded as negligible and valueless, when compared with the advantages seen in an "area" or "terror" assault on the German populace. In the event, however, area bombing proved very disappointing, not only in the destruction of industries located in cities, but in the reducing of the German willingness to serve the Nazi regime, and the optimistic calculations of 1941 have been subjected to much criticism since the war.

A strong case has in fact been made that, from practical non-bargaining considerations alone, the area attack by night was a bad investment, and that a precision daylight assault by Bomber Command (even with higher losses) would have contributed more to the final victory.

It might be additionally contended that the reversal of the faith in "area" bombing, combined with a greater awareness of the German willingness to bargain, would have made deliberate Allied restraints after 1942 seem quite appropriate. It might be claimed that the "sense-

less" destruction of area bombing should have been used only as an unexecuted deterrent, to prevent the relatively weaker, yet deliberately terroristic Baedeker raids and "Baby Blitz," and the indiscriminate V-1 and V-2 attacks.

Yet the exaggerated hopes inherited from Douhet by the British planners outlived the exaggerated fears disproved in the Blitz, and no limitation was probable after 1941. Only German discretion designed to perpetuate the balance of the exaggerations would have made a persistent limited air war likely.

The problem of controlled and limited use of strategic nuclear weapons is a serious one for Western military planners today. The early years of World War II represent an instance of a very similar problem, in which the questions of communication, command and control, escalation, ultimate national values, bluffing and, finally, breakdown all were raised. The relevance of this instance to weapons of considerably greater magnitudes remains to be determined, but at the least this example discourages any overconfidence about our ability to find easy solutions to the problem.

*How could Hughes losses
be sustained by RAF?*